The Journal of the American Medical Association

Published Under the Auspices of the Board of Trustees

VOL. 133, NO. 12 — CHICAGO, ILLINOIS — MARCH 22, 1947

COPYRIGHT, 1947, BY AMERICAN MEDICAL ASSOCIATION

Q FEVER IN THE UNITED STATES

I. Epidemiologic Studies of an Outbreak Among Stock Handlers and Slaughterhouse Workers

NORMAN H. TOPPING, M.D.
CHARLES C. SHEPARD, M.D.
Bethesda, Md.
and
J. V. IRONS, D.Sc.
Austin, Texas

During the month of March 1946 there occurred in Amarillo, Texas, an explosive outbreak of an acute febrile illness which has since been identified as Q fever. The other papers in this series will give the details of the clinical features observed in the cases and the evidence on which the diagnosis of Q fever depends. It is the purpose of this report to give the background of the outbreak with descriptions of the industries involved as well as the sequence of events pertinent to the epidemiologic investigations.

Amarillo is a city of about 70,000 inhabitants located near the center of the Texas panhandle. It is surrounded by country well suited to the raising of livestock and thereby has become a center for this industry. Since the city is situated at the junction of several large railroads by which cattle are shipped to the east, a feeder station has been established there for cattle in transit. The owners of this stockyard which serves as the feeder station also own a livestock auction company, one of the largest in the United States. Nearby, under entirely separate ownership and management, is a packing plant where livestock are killed and dressed for the local market.

All the cases of Q fever which occurred during the explosive outbreak in March were among the employees of these three places or those associated with the handling of the livestock. Three cases occurred in a train crew of 3 occupied in switching cattle trains in and out of the stockyards. Three cases occurred in 4 brand inspectors employed by the Southwestern Cattlemen's Association. They inspected the brands on cattle being sold at auction and occupied a small office in the stockyards. Fifteen cases occurred among 22 employees of the stockyard, 3 cases occurred among 10 regular employees of the auction sales company, and there were 31 cases among 97 employees of the packing plant. There was, then, a total of 55 cases of Q fever among 136 people exposed, an attack rate of 40 per cent.

As the epidemiologic investigations were made from four to six weeks after the outbreak, it was decided to use the employers' absentee records to establish approximate dates of onset for those sufficiently ill to require time off from work. The 15 cases at the stockyard occurred between March 7 and 29, 50 per cent of the cases occurring on or before March 10. The 31 cases at the packing plant occurred between March 10 and 19, with 50 per cent on or before March 14. The cases in the employees of the auction company and those in the members of the train crew occurred about the same time as the cases in the employees of the stockyard.

All the stockyard employees except 1 were engaged in loading and unloading livestock from railroad cars and trucks and in feeding and watering them while they were in the pens of the yard. The 1 exception was a woman bookkeeper in the stockyard office which was alongside the loading docks and in the midst of the pens. She and 14 men employees had Q fever.

The train crews bring the cars to the loading dock and often stand there while cattle are loaded or unloaded. They also spend considerable time in the stockyard office, where there is a stove and a soft drink dispenser. The brand inspectors occupy an office in the same building but work in the pens. Frequently it is necessary for them to clip the hair of cattle in order to see the brands properly.

The auction sales company office is less than 100 yards from the office of the stockyards. The space between is filled with innumerable pens for cattle. The livestock auctions are held on Monday and Tuesday of each week. There are only 10 regular employees, but on sales days between 80 and 100 people are employed, most of them as handlers of the cattle to be sold, the remainder as clerical help and auctioneers. On a usual sale day between 2,000 and 3,000 head of cattle are sold at auction, each animal being driven around a small ring before a crude amphitheater, in which the prospective purchasers are seated. For the most part, the cattle being sold are trucked in the evening before or the morning of the sale; occasionally some arrive by train. While in the pens they are fed and watered by the employees of the stockyard, as well as by some of the regular employees of the sales company. Two of these latter had mild illnesses; the third case among the sales company employees, which was also mild, occurred in a woman bookkeeper.

The packing plant lies about half a mile from the buildings and pens of the stockyards and sales company. It is composed of the main building of three stories and a one story office wing. There are many pens for stock along one side of the grounds connected with the killing room in the main building by an open cattle chute. In the month preceding and during the outbreak there were 18 employees on the killing floor primarily engaged in the killing, skinning and dressing of cattle and hogs.

From the Division of Infectious Diseases, National Institute of Health (Drs. Topping and Shepard) and Director of Laboratories, Texas State Health Department (Dr. Irons).

In 12 of these 18 men Q fever developed. There were 3 men employed in the boning department. Their job consists in cutting the meat from the skulls of cattle and hogs. Q fever developed in all 3, and 1 of them died. Three men were employed in the tankage department which opens onto the killing room, where they frequently work in the event of illness of the regular employees. They handle the remains of the carcasses and process them into tankage. Two of these 3 men acquired Q fever. Five men were employed in the curing department, which is a large room in the basement directly under the killing room and connected with it by way of an open chute. The hides are stripped from the freshly killed animals and dropped through this open chute from the killing floor. The men in the curing department then stretch them on piles of hides and place the curing materials on them. Three of the 5 men employed in this department contracted Q fever. Eighteen persons, 10 women and 8 men, are employed in the sausage department. The sausage is of various types and is made from both beef and pork. The men do most of the handling of the raw meat in sausage preparation, and most of the women are occupied in the handling after the sausage has been placed in the casings. In 5 of the men in this department Q fever developed, and 1 of them died. There were no cases among the women.

Summary of Number and Occupation of Employees and Incidence of Q Fever at the Packing Company

Department	No. of Employees	No. of Cases of Q Fever
Killing floor	18	12
Boning	3	3
Lard	1	1
Tankage	3	2
Curing	5	3
Sausage	18	5
Upkeep	9	1
Cooler and bacon	5	0
Buyer	2	0
Delivery	15	2
Office	18	2
Totals	97	31

The 1 man employed in the lard department also doubled frequently on the killing floor. He contracted Q fever. Of 9 employees having to do with upkeep, such as engineers and carpenters, only 1 had the disease. He was a yardman who took care of the stock in the pens and drove them up the chute to the killing floor. In neither of the 2 cattle buyers did the disease develop; this was also true of the 5 employees engaged in the preparation of bacon or working in the pork cooler. Among 18 employees in the offices there were only 2 cases, both in workers who handled fresh meat for delivery to consumers' trucks. Of 15 plant delivery men, only 2 contracted the disease. The accompanying table summarizes, by occupation, the number of employees at the packing company as well as the cases of Q fever.

In reviewing the experience at the packing company it will be noted that the disease primarily affected those engaged in killing the animals and handling the freshly killed meat. If the 8 men who worked in the sausage department are added to the first five categories in the summarization table, we see that of 38 employees there were 26 cases, an attack rate of 68 per cent. The remainder of the employees, including the 10 women in the sausage department, total 59 with only 5 cases of Q fever, an attack rate of only 8 per cent. These 5 also had rather close contact with the animals or their products.

The slaughtering records for the packing company revealed that from February 15 to March 22 only one lot of sheep was killed, and this was a small group of 18, on March 9. The first case of Q fever here was on March 10.

Since the incubation period for Q fever is thought to be fourteen to twenty-six days, the sheep obviously were not involved in the beginning of the epidemic. Large numbers of hogs were killed during the same period, but the companies' records indicated that these were purchased in lots of 1 to 20 from individual farmers who truck the hogs into the packing plant. At no time were any of these hogs in the pens of the stockyards, nor did they go through the sales company. Therefore these hogs could have been the cause of the outbreak of Q fever among the packing plant employees but certainly were not the cause of the outbreak among the employees of the other two companies.

During the period February 15 to March 22 many cattle were slaughtered. Some were purchased from individuals, but most were purchased from one or the other of the two livestock auction companies in the city. More than half the cattle purchased during this period had been purchased through the sales company in whose employees Q fever had occurred. The other auction company had had no cases among its help as far as could be determined and therefore was dismissed from further consideration.

By checking the records of the sales company it was found that with the exception of one lot the cattle were trucked into the pens either the evening before or the morning of the sales. The one lot that was the exception consisted of 41 white faced heifers that were shipped into Amarillo, Texas, by rail and were unloaded at the stockyard on February 23. They went through the auction ring of the sales company on February 25, were delivered to the packing plant on the morning of February 26 and were slaughtered the same day. This single lot of 41 cattle fulfilled the necessary requirements of having arrived by rail, of having spent several days in the pens of the stockyard, of having been sold through the sales company and, finally, of having been slaughtered and processed at the nearby packing plant. The time interval between reception of this lot of cattle in the stockyard (February 23) and the date on which 50 per cent of the cases of Q fever among stockyard employees occurred (March 10) is sixteen days. The time interval between the date (February 26) the cattle were slaughtered and processing begun at the packing plant and the date (March 14) on which 50 per cent of the cases among packing plant employees occurred is seventeen days. These agree well with the fourteen to twenty-six day incubation period thought to exist in Q fever.

Nothing unusual was found on further investigation of these 41 head of cattle. They were approximately yearlings when slaughtered. They, together with other cattle, had been purchased in November 1945 from around Portales and Clovis, N. Mex., and Wheeler, Texas. They had grazed on a ranch near Bovina, Texas, from November 1945 until Feb. 22, 1946, when they had been shipped by rail to Amarillo for sale. No history of illness could be elicited. This is not an unusual history of frequent sales and movement of

cattle in Texas. From the same ranch and same lot of cattle 171 steers had been shipped to Colorado on February 26. They were unloaded, fed and watered but then reloaded at the stockyards in Amarillo while in transit to Colorado.

In search of a history of possible vectors on the cattle coming into the packing plant in Amarillo, we were told by many that the presence of ticks on the cattle in that vicinity was extremely rare. On examination of many cattle in the yards, no ticks were found during the early part of May 1946. Rats were trapped both at the packing plant and the stockyards, but nothing unusual was noted either in the gross pathology or the ectoparasites found on the rats. Eleven samples of serums from the rats had no agglutinins for Rickettsia burneti.

COMMENT

In the analysis of the data several interesting inferences can be drawn. First, even though the employees of the stockyards, sales company and packing plant had for the most part been long engaged in their respective occupations, they as a group did not exhibit immunity to Q fever. It might be inferred that this outbreak represents their first effective exposure to the disease. Second, since no evidence was obtained implicating arthropods and since there was no evidence of spread from person to person, the mode of infection is in doubt. In the packing plant the handling of freshly killed meat certainly carried with it a high risk of infection. There the outbreak was explosive, since all 31 cases occurred within a nine day period. This leads one to the assumption that the infectious agent did not long remain in the packing company; although there were still persons who were susceptible, more cases did not occur after the nine days. The situation in the stockyards, however, was different. Here the risk involved every one exposed to living cattle, and although the first case among these employees occurred three days before the first case at the packing company, the last case occurred ten days after the outbreak at the packing company was over. Therefore, it would seem that the infectious agent was present in the stockyards for a considerable period. It may have been in the dust, as was suggested in one laboratory outbreak,[1] and it may have gotten there from the excreta of the cattle. The rickettsia of Q fever has been isolated from the urine of guinea pigs for considerable periods of time subsequent to infection,[2] and R. burneti is known to be resistant to many agents which are lethal for most micro-organisms.[3] Third, it would seem that cattle can be infectious for stock handlers even though the cattle themselves do not appear ill or exhibit any remarkable gross pathologic conditions during processing.

SUMMARY

An outbreak of Q fever occurred in stock handlers and slaughterhouse workers in Amarillo, Texas, in 1946. There were 55 cases and 2 deaths among 136 employees of three establishments, an attack rate of 40 per cent. The epidemiologic investigations revealed that cattle were probably the source of the human infections in this particular outbreak.

1. Hornibrook, J. W., and Nelson, K. R.: An Institutional Outbreak of Pneumonitis: I. Epidemiological and Clinical Studies, Pub. Health Rep. **55**: 1936-1944, 1940. Dyer, R. E.; Topping, N. H., and Bengtson, I. A.: An Institutional Outbreak of Pneumonitis: II. Isolation and Identification of Causative Agent, ibid. **55**: 1945-1954, 1940.
2. Parker, R. R., and Steinhaus, E. A.: American and Australian Q Fevers: Persistence of the Infectious Agents in Guinea Pig Tissues After Defervescence, Pub. Health Rep. **58**: 523-527, 1943.
3. Huebner, R. J.: Unpublished data.

Q FEVER IN THE UNITED STATES

II. Clinical Data on an Outbreak Among Stock Handlers and Slaughterhouse Workers

J. V. IRONS, D.Sc.
Austin, Texas
and
JOHN M. HOOPER, M.D.
Amarillo, Texas

In March 1946 there occurred at Amarillo, Texas, an explosive outbreak of acute febrile illnesses which was shown [1] to be closely related to or identical with Q fever. The other papers in this series deal with the epidemiologic, serologic and rickettsial data on this outbreak. It is the purpose of this report to present some of the clinical features observed in these cases. The clinical data were obtained mainly from the 18 hospitalized patients since the remaining 37 patients treated at home, although the cases were similar, were not so completely observed. While several of those who remained at home were seriously ill, other employees contracted mild, influenza-like illnesses and in 1 or 2 instances remained at work during the illness. Six instances of probable subclinical or inapparent infection were uncovered through serologic tests for Q fever on workers presumably exposed to the disease but without a history of subsequent illness.

The onset in nearly all cases was fairly sudden but usually was not severe. In an occasional case the onset was somewhat insidious. The illness was usually ushered in by constitutional symptoms, with few if any symptoms referable to the respiratory tract. Two patients complained of troublesome and persistent nasal discharge, possibly resulting from recurrence of sinusitis. The onset usually was characterized by headache, chilly sensations, general malaise and, sometimes, nausea or vomiting. Frequently there was a latent period of from one to three days following the onset, and in some instances the patient returned to work or continued to work while feeling ill.

Severe and persistent headache was a common complaint, which developed early in the illness. Occasional patients also complained of nuchal pain. Other common complaints on admission to the hospital were feverishness, weakness, anorexia, soreness of the chest, generalized bodily aches and pains and chilly sensations. Frank rigors were experienced by 5 patients. Some patients experienced nausea and vomiting. Diarrhea and other evidence of gastrointestinal infection were uncommon. During the period of hospitalization drenching sweats were frequent and insomnia also was troublesome. In 5 of the most severe infections the patients became drowsy or even stuporous.

Several patients contracted a slight cough, which generally was nonproductive or productive of a small amount of thick, tenacious, white or occasionally blood-tinged mucus. More than half of the patients experienced thoracic pain in the substernal area or on the side of the demonstrated lesion of the lung; the pain was at times referred to the lower ribs and back. The pain in the chest generally was more of a neuralgic than of a pleuritic character and usually was not associated with respiratory difficulties.

Director of Laboratories, Texas State Department of Health (Dr. Irons) and Director of Public Health Department, Amarillo (Dr. Hooper).

1. Irons, J. V.; Topping, N. H.; Shepard, C. C., and Cox, H. R.: Outbreak of "Q" Fever in the United States, Pub. Health Rep. **61**: 784-785, 1946.

Abnormal findings on physical examination in most instances were particularly negligible at the time of hospitalization, even though illness in some instances had been present for several days and the patients were moderately toxic, usually with moderately high fever on admission.

The respiratory rates generally were not unusual and averaged about 24 to the minute. With few exceptions the patients were without respiratory difficulty, and with only 1 or 2 exceptions there were none of the obvious symptoms of pneumonia, such as dyspnea, inspiratory-respiratory grunt or cough with typical rusty or blood-streaked sputum. Mild cyanosis was observed in 4 patients who were without evidence of respiratory difficulty. On admission the average pulse rate was 94 beats per minute and the average temperature was 101.5 F. Temperatures on admission varied from 97 to 105 F. The pulse rate, although elevated, frequently was somewhat low in proportion to the fever and did not always parallel the temperature curve. On admission the 2 cases which terminated fatally exhibited the highest temperatures and pulse rates in the series. In most instances the duration of fever was from one to two weeks.

Roentgenologic examination of the chest was the main source of evidence of pulmonary lesions. The lesions frequently were the patchy type seen in bronchopneumonia. A soft, diffuse type of infiltration, singular or multiple and usually lacking the uniform density observed in lobar pneumonia was seen on the roentgenograms. The lower lobe of the left lung perhaps was more often involved than the lower lobe of the right. More than one lobe seldom was involved. There apparently was little correlation between the severity of illness and the degree of pulmonary involvement. For the most part roentgenologists reported the films as showing atypical or beginning pneumonia or pneumonitis. Since the physical signs of lung involvement were minimal, without roentgen ray examination several patients hardly would have been seriously considered to have suffered from a pneumonic process. In view of the common complaint of pain in the chest in some degree by nonhospitalized patients, it seems certain that pulmonary or pleural involvement occurred in the great majority of cases in this outbreak

A summary of the clinical data on hospitalized patients is shown in the accompanying table, and the roentgenologic data and the physical signs are given later in the form of brief case reports.

The rash frequently noted in other rickettsial diseases was minimal or absent. Mention was made in 2 or 3 instances of a few small spots of doubtful significance on the ankles or chest. In no instance was there pronounced jaundice. The spleen was recorded as palpable only in 1 case. Enlargement of lymph glands was not noticed in any case.

For the most part the red blood cell counts and hemoglobin determinations were within normal range. In all except 2 or 3 patients the total white cell count at the time of admission to the hospital was within normal limits. In cases in which the count was elevated, as the illness progressed the count showed a decrease or no increased elevation. The differential count showed an average of more than 70 per cent neutrophils in all instances. Blood for culture was taken on one or more occasions from 4 or 5 patients. On two or three occasions a diphtheroid of no significance was encountered, otherwise the cultures were reported as bacteriologically negative. Agglutination tests, with Eberthella typhosa, Salmonella paratyphi A, Salmonella paratyphi B, Brucella abortus, Proteus OX 19 and Pasteurella tularensis as antigens, were performed on serums from 7 hospitalized and several nonhospitalized patients; the results were essentially negative.

Urinalyses were negative except for occasional transient mild albuminuria during the febrile period. Typical pneumococci were not found in sputum from 5 patients. Mice injected with sputum from 3 patients were reported negative for pneumococci. Staphylococci, streptococci and similar organisms were found.

Clinical Data on Eighteen Patients Hospitalized with Q Fever

Cases *	Date of Onset, 1946	Date Stopped Work, 1946	On Admission: Temperature, F.	On Admission: Pulse Rate	On Admission: Respiratory Rate	Total Duration Fever, Days	Date of Defervescence, 1946	Symptoms at Onset	Cough	Expectoration	X-Ray
A. R. W.	3/16	3/19	103.0	98	26	15	4/ 3	Headache, malaise	++	++	Atypical pneumonia
E. M.	3/ 9	3/11	99.0	84	22	10	3/20	Headache, malaise and nausea	+	+	Atypical pneumonia
E. B. J.	3/20	3/20	103.0	90	22	43	5/ 2†	Headache	+	+	Atypical pneumonia
M. E. S.	3/ 9	3/11	101.0	92	24	9	3/19	Headache	—	—	
W. H. L.	3/ 9	3/10	102.0	90	24	7	3/16	Headache, malaise	—	—	
N. H. S.	3/17	3/18	102.6	100	24	12	3/30	Headache, malaise	+	—	Atypical pneumonia
L. M. C.	3/16	3/16	99.0	100	25	5	3/22	Headache, chills and nausea	+	—	Beginning pneumonia
A. B.	3/ 9	3/11	101.0	92	22	7	3/17	Headache, malaise	+	—	Atypical pneumonia
L. W.	3/17	3/18	101.5	85	24	8	3/26	Headache, chills and sweats	+	+	
D. W. M.	3/14	3/15	105.0	120	34	6+	died 3/21	Headache, malaise	++	++	Pneumonia
E. L. M.	3/ 9	3/10	103.6	104	18	10+	died 3/19	Headache	+	—	
S. T. O.	3/12	3/13	102.4	98	32	11	3/25	Malaise, nausea	+	+	Central pneumonia
L. E. S.	3/16	3/19	100.5	78	24	7	3/26	Cold, malaise	+	+	Atypical pneumonia
W. A. S.	3/15	3/16	102.8	100	24	9	3/25	Nausea, malaise	+	+	Atypical pneumonia
E. M. H.	3/21	3/22	97.0	85	22	19	4/ 9	Malaise, chills and nausea	+	+	
T. E. M.	3/17	3/19	100.0	85	20	13	4/ 1	Headache, malaise	+	—	No consolidation; pleurisy
E. L. W.	3/13	3/14	.....	..	..	15—	3/29	Nausea, headache	+	+	Pneumonitis
R. L. R.	3/15	3/15	103.4	100	24	7	3/22	Nausea, headache	+	—	No consolidation

* All cases listed occurred in white males.
† Temperature was normal March 27 to 29, the course of the disease was complicated by pleural effusion later.

Complement fixation tests for typhus and spotted fever also were performed on late convalescent serums from several patients. In each instance the results of the tests were essentially negative. Several late convalescent serums tested for cold agglutinins [2] of atypical pneumonia gave essentially negative results. With serums obtained in convalescence or a few weeks after recovery, complement fixation and rickettsial agglutination tests almost without exception were positive for Q fever.

The usual supportive treatment was followed with hospitalized patients. In addition the sulfonamide compounds and penicillin were employed, but it was not believed that these drugs, either alone or in combination, exerted any appreciable effect on the course of the illness. Certainly the fever did not show the prompt and decided diminution which might be expected with successful therapy of pneumonia. Para-aminobenzoic acid (PABA), which has been reported to be beneficial in the treatment of other rickettsial diseases,[3] was not tried.

Two deaths in brothers occurred in the series. One of these cases displayed definite evidence of pneumonia. Unfortunately, autopsies were not performed in these 2 fatal cases.

REPORT OF CASES

The physical signs and roentgenologic findings of the hospitalized patients are summarized in the following case reports.

A. R. W.—Bronchovesicular breathing and increased breath sounds; rales heard. March 22, 1946—Roentgenogram: area of increased density in upper and middle lobes of the right lung. March 29—Area of increased density in the right lung had decreased. Impression: atypical pneumonia.

E. M.—Area of consolidation in lower lobe of the left lung with soft peribronchial thickening in both lungs and scattered soft spotty infiltration. March 14—Roentgenogram (fig. 1): small area of increased density, lower lobe of the left lung. Impression: atypical pneumonia.

E. B. J.—Essentially negative. March 22—Roentgenogram: pneumonitis in the lower lobe of the right lung. April 17—Breath sounds in right axilla frankly tubular; no rales. Roentgenogram shows area of increased density, lower lobe of the right lung. Impression: atypical pneumonia; probably complicated with pleural effusion.

Fig. 1 (E. M.).—Small area of increased density in the lower lobe of the left lung.

Fig. 2 (D. W. M.).—Areas of increased density involving both lobes of the left lung.

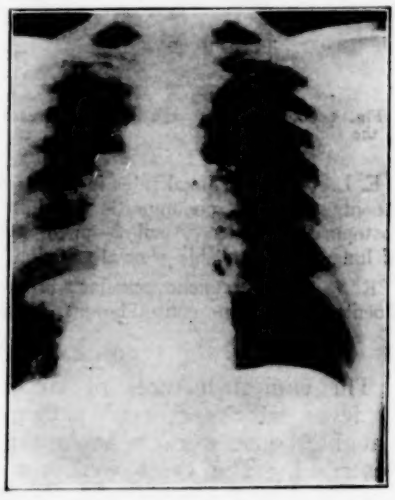

Fig. 3 (S. T. O.).—Diffuse area of opacity in the upper part of the lower lobe of the left lung.

Most patients made an uneventful recovery. In the less severe illnesses the patients were up and ready to return to work shortly after the temperature had returned to normal. In several instances of more severe infection there was a loss in weight of 15 to 20 pounds (7 to 9 Kg.). At least 3 patients still complained of slight cough and slight pain in the chest several days after their return to work. In 3 patients the illness was complicated and in 1 instance much prolonged by pleurisy and effusion. In 2 patients there was a late complaint of arthritis which involved the wrists, fingers or knees. A painful knee with some swelling developed, apparently as a late complication, in 1 otherwise relatively mild uncomplicated case. In 2 cases a well defined unilateral orchitis and slight epididymitis developed late in the course of illness. Cultures in these 2 cases were negative for Neisseria gonorrheae.

N. H. S.—Bronchovesicular breathing; a few fine rales. March 23—Roentgenogram: peribronchial thickening in both lungs; a diffuse area of opacity, upper part of lower lobe of the left lung. Impression: atypical pneumonia.

L. M. C.—Essentially negative, except for a few fine rales. March 18—Roentgenogram: slight diffuse area of increased density, lower lobe of the left lung; possible beginning pneumonia.

A. B.—A few rales heard in both lungs. Roentgenogram: increased area of density, perhaps more pronounced in lower lobe of the left lung. Impression: primary atypical pneumonia.

D. W. M.—Patient in respiratory distress with rapid shallow breathing; many rales heard. March 19—Roentgenogram: areas of increased density involving both the upper and lower lobes of the left lung (fig. 2). Impression: pneumonia.

S. T. O.—Occasional rales and bronchovesicular breathing. March 21—Roentgenogram: diffuse area of opacity, upper part of lower lobe of the left lung (fig. 3). Impression: central pneumonia.

L. E. S.—Occasional central rales with bronchial breathing throughout. March 22—Roentgenogram: large area of increased density, lower lobe of the right lung (fig. 4). Impression: atypical pneumonia.

2. Cold Hemagglutinins in Primary Atypical Pneumonia and Other Respiratory Infections, Commission on Acute Respiratory Diseases, Am. J. M. Sc. **208**: 742-750, 1944.

3. Yeomans, A.; Snyder, J. C.; Murray, E. S.; Zarafonetis, C. J. D., and Ecke, R. S.: The Therapeutic Effect of Para-Aminobenzoic Acid in Louse Borne Typhus Fever, J. A. M. A. **126**: 349-356 (Oct. 7) 1944; correction, ibid. **126**: 581 (Oct. 28); 782 (Nov. 18) 1944. Tierney, N. A.: Effect of Para-Aminobenzoic Acid in Tsutsugamushi Disease, ibid. **131**: 280-285 (May 25) 1946. Flinn, L. B.; Howard, J. W.; Todd, C. W., and Scott, E. G.: Para-Aminobenzoic Acid Treatment of Rocky Mountain Spotted Fever, ibid. **132**: 911-915 (Dec. 14) 1946.

W. A. S.—Occasional rales; bronchial breathing throughout both lungs. March 21—Roentgenogram: large area of increased density involving almost the entire lower lobe of the left lung. Impression: atypical pneumonia.

T. E. M.—Essentially negative; no rales. March 22—Roentgenogram: no demonstrable pneumonia; slight thickening of pleura, upper lobe of the right lung (fig. 5). Impression: pleurisy.

Fig. 4 (L. E. S.).—Large area of increased density in the lower lobe of the right lung.

E. L. W.—Occasional rales in right side of chest. March 27—Roentgenogram: pneumonitis in right lower lobe of lung at costophrenic angle. April 2—pneumonitis in right lower lobe of lung, with probable pleural effusion.

R. L. R.—Bronchovesicular breathing; occasional rales. Roentgenogram: no consolidation. Impression: acute bronchitis.

COMMENT

The clinical features of an explosive outbreak of Q fever which occurred among stock handlers and slaughterhouse workers at Amarillo, Texas, have been described. The cases were similar except for wide variations in the severity of illness, which ranged from mild influenza-like attacks to grave illnesses with 2 deaths. The most outstanding observations were rather abrupt onset associated with frontal headache, chilly sensations and general malaise, high fever of five to fifteen days' duration, essentially normal white blood cell count, roentgenologic evidence of pulmonary lesions with minimal symptoms and physical signs referable to the respiratory tract and comparatively rapid convalescence. The cutaneous manifestations which are characteristic features of other known rickettsial diseases were not observed. Except for frequent evidence of pulmonary lesions, these cases seemed similar to those originally described in Australia by Derrick.[4] Hornibrook and Nelson [5] first called attention to evidence of pulmonary lesions in an institutional outbreak of Q fever at Washington, D. C. Roentgenologic examination showed the occurrence of pulmonary lesions in varying degrees in other recent outbreaks.[6]

In the absence of evidence of lesions of the lungs Q fever is not readily differentiated from the early stages of many acute febrile conditions such as typhoid, typhus and brucellosis. With recognition of pulmonary or pleural involvement, the problem of differentiation changes. In the Amarillo cases primary atypical pneumonia was excluded because of the acute onset, lack of symptoms referable to the upper part of the respiratory tract, comparatively rapid convalescence and lack of cold agglutinins in convalescent serums. Lack of history of contact with birds seemed to rule out the probability of psittacosis. While the clinical and epidemiologic observations were suggestive of Q fever, the diagnosis was established primarily on the basis of laboratory procedures, with particular reference to increasing complement fixation titers during convalescence and after recovery. Sulfonamide and penicillin therapy was ineffective. Para-aminobenzoic acid therapy was not tried.

The Amarillo epidemic of Q fever represents the first sizable outbreak of this disease acquired naturally in the United States. Previous reports [7] had suggested the natural occurrence of Q fever in this country. While a sizable outbreak of Q fever [6b] occurred among troops at Camp Patrick Henry, Virginia, in the spring of 1945, it was quite clear that the infections had been acquired in Italy. It is becoming increasingly clear that Q fever must require consideration in the differentiation of atypical and nonbacterial pneumonia and undiagnosed acute febrile illnesses. While the identification of Q fever is dependent on laboratory procedures, this disease should be suspected when clinical, roentgenographic or epidemiologic features of Q fever occur.

CONCLUSIONS

The clinical and roentgenographic aspects of a naturally occurring outbreak of 55 cases of Q fever is described. Eighteen hospitalized patients were studied, of whom the majority showed pulmonary lesions.

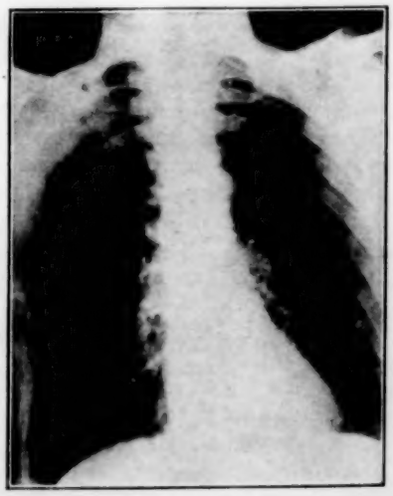

Fig. 5 (T. E. M.).—Slight thickening of pleura, upper lobe of the right lung.

The cases as a group presented a syndrome characterized by fever, headache, constitutional symptoms and minimal signs or symptoms referable to the respiratory tract.

4. Derrick, E. H.: "Q" Fever, a New Fever Entity: Clinical Features, Diagnosis and Laboratory Investigation, M. J. Australia **2**: 281-299, 1937.

5. Hornibrook, J. W., and Nelson, K. R.: An Institutional Outbreak of Pneumonitis: I. Epidemiological and Clinical Studies, Pub. Health Rep. **55**: 1936-1944, 1940.

6. (*a*) A Laboratory Outbreak of "Q" Fever Caused by the Balkan Grippe Strain of Rickettsia Burneti, Commission on Acute Respiratory Diseases, Am. J. Hyg. **44**: 123-157, 1946. Robbins, F. C., and Ragan, C. A.: "Q" Fever in the Mediterranean Area: Report of Its Occurrence in Allied Troops; I. Clinical Features of the Disease, ibid. **44**: 6-22, 1946. (*b*) Feinstein, M.; Yesner, R., and Marks, J. L.: Epidemics of "Q" Fever Among Troops Returning from Italy in the Spring of 1945: I. Clinical Aspects of the Epidemic at Camp Patrick Henry, Virginia, ibid. **44**: 72-87, 1946. (*c*) Cheney, G., and Geib, W. A.: The Identification of "Q" Fever in Panama, ibid. **44**: 158-172, 1946.

7. Cox, H. R.: Rickettsia Diaporica and American "Q" Fever, Am. J. Trop. Med. **20**: 463-469, 1940. Hesdorffer, M. B., and Duffalo, J. A.: American "Q" Fever: Report of a Probable Case, J. A. M. A. **116**: 1901-1902 (April 26) 1941. Hornibrook and Nelson.[5]

Q FEVER IN THE UNITED STATES

III. Serologic Observations in an Outbreak Among Stock Handlers and Slaughterhouse Workers

J. V. IRONS, D.Sc.
J. N. MURPHY Jr.
Austin, Texas
and
DON M. WOLFE, Ph.D.
Pearl River, N. Y.

The preceding articles in this series cover the clinical and epidemiologic aspects of the outbreak of Q fever at Amarillo, Texas, in March 1946. The present report describes the results of complement fixation tests for Q fever obtained with serums from patients infected in this outbreak. The first significant indication that the Amarillo outbreak of illnesses was caused by the strain of rickettsia responsible for Q fever came from complement fixation tests done on convalescent serums.

Burnet and Freeman,[1] Cox [2] and Dyer, Topping and Bengtson [3] utilized direct rickettsial agglutination, while Bengtson [4] first applied the complement fixation technic using yolk sac antigen in serologic tests for Q fever. With serums obtained from patients infected in the Amarillo outbreak, a modified Kolmer, quantitative complement fixation procedure with overnight ice box fixation was employed. The Q fever antigen [5] was prepared from a strain isolated in 1935 from Dermacentor andersoni in Montana—the American Nine Mile strain.[6] The antigen used was diluted 1:4 or 1:8. Complement was titrated in the presence of antigen, and 2 units of complement were employed in all tests. Tubes containing inactivated serum in serial dilution, antigen and complement were placed in the chillroom for about eighteen hours. The next morning the hemolytic system, consisting of 2 units of amboceptor and 2 per cent washed sheep cells, was added, and the tubes were incubated in 37 C. water bath. Tests were recorded as soon as the serum and antigen controls showed complete hemolysis. Positive and negative serum controls were included in each series of tests. Results could be duplicated without much variation in serum titers. Whenever possible serial blood samples obtained from the same person were tested simultaneously. Serologic confirmation of the diagnosis of Q fever was obtained with the majority of suspect cases, as shown in table 2.

Table 3 shows that significant complement fixation titers appeared during the second week after the onset of illness. However, in some cases the highest titers were not reached before the fourth or fifth week after the onset of illness. In most instances high titers were maintained at least for a few weeks.

TABLE 1.—*Results of Complement-Fixation Tests for Q Fever with Paired Serums from Several Cases*

Serum of Patient	Date of Onset	Date of Bleeding	Serum Dilutions Plus Antigen (American Q Fever Strain) 1:20	1:40	1:80	1:160	1:320	1:640	1:1,280	1:2,560	1:5,120	1:10,240
A. C. B.	3/15	3/25	4	4	4	4	—	—	..	..	..	..
		4/25	..	4	4	4	4	4	—	—	..	..
C. E. D.	3/10	3/26	..	4	4	4	4	4	4	2	—	—
		4/25	..	4	4	4	4	4	4	4	2	—
P. G. G.	3/ 9	3/25	..	4	4	4	1	—	..	..	..	..
		4/25	..	4	4	4	4	4	—	—	..	..
C. W.	3/15	3/25	..	4	4	2	—	—	..	..	..	..
		5/ 2	..	4	4	4	4	—	—	..	..	..
A. R. W.	3/16	3/24	—	—	—	—	..	..	..	..	..	..
		4/ 1	4	4	4	4	4	2	..	..	..	..
N. H. S.	3/17	3/25	—	—	—	—	..	..	..	..	..	..
		5/ 2	4	4	4	4	—	—	..	..	..	..
L. W.	3/17	3/25	4	4	4	—	—	..	..	..	..	..
		4/ 1	4	4	4	4	4	4	—	..	..	..
S. T. O.	3/12	3/20	—	—	—	..	..	..	..	..	..	..
		3/25	4	4	4	—	—	—	..	..	..	..
		5/ 2	4	4	4	4	4	4	4	—	—	—
E. M. H.	3/21	3/25	—	—	—	—	..	..	..	..	..	..
		5/27	4	4	4	4	4	4	4	—	—	—
D. W. M. (died 3/21)	3/14	3/17	—	—	—	—	..	..	..	..	..	..
Controls												
Immune guinea pig serum			4	4	4	4	4	—	..	..	..	..
Negative human serum			—	—	—	—	..	..	..	..	..	..

The results obtained with paired serums from several patients are shown in table 1. The increased titers during convalescence and after recovery from illness are noticeable in most instances when the first bleeding was not too late. The relatively early samples of serum from patients A. R. W., N. H. S., S. T. O., E. M. H. and D. W. M. gave negative results.

The specificity of the complement fixation test for Q fever was shown by employing several of the same serums in identical tests except that endemic typhus and spotted fever antigens, respectively, were used in place of the Q fever antigen. None of the Amarillo

From the Texas State Health Department (Dr. Irons and Mr. Murphy) and from the Viral and Rickettsial Research Section, Lederle Laboratories, Inc., division of the American Cyanamid Company, Pearl River, N. Y. (Dr. Wolfe).

1. Burnet, F. M., and Freeman, M.: Experimental Studies on the Virus of Q Fever, M. J. Australia **2**: 299-305, 1937.
2. Cox, H. R.: Rickettsia Diaporica and American Q Fever, Am. J. Trop. Med. **20**: 463-469, 1940.
3. Dyer, R. E.; Topping, N. H., and Bengtson, I. A.: An Institutional Outbreak of Pneumonitis: II. Isolation and Identification of Causative Agent, Pub. Health Rep. **55**: 1945-1954, 1940.
4. Bengtson, I. A.: Complement-Fixation in Q Fever, Proc. Soc. Exper. Biol. & Med. **46**: 665-668, 1941.
5. The antigen was prepared as follows: Yolk sacs from Q fever (American Nine Mile)-infected embryonated eggs that were living on the sixth day of infection were harvested and held in the frozen state in carbon dioxide snow until ready for processing. The frozen yolk sacs were thawed, weighed and diluted with an equal portion of isotonic solution of sodium chloride by weight containing 0.8 per cent solution of formaldehyde. The mixture was homogenized in a Waring blendor and allowed to inactivate overnight at 4 C.

The above suspension was diluted to a 10 per cent yolk sac content with isotonic solution of sodium chloride and ether-extracted for six hours at 4 C. with four-fifths volume of ether. The aqueous phase was recovered and further treated with a quarter volume of ether overnight at 4 C.

The aqueous phase was recovered and the excess ether removed by evacuation at room temperature. The resulting suspension was then placed in cellophane bags and concentrated to one third of its volume by perevaporation.

Such an antigen was usually found antigenic in a dilution as high as 1:32 by complement fixation methods and could be used in a dilution of 1:8 or 1:16 for subsequent testing of serums of patients suspected of having Q fever. This antigen did not give cross fixation reactions with serums from guinea pigs convalescent from infection with Rocky Mountain spotted fever, murine or epidemic typhus.

(Footnote 5 continued in next column)

6. Davis, G. E., and Cox, H. R.: A Filter-Passing Infectious Agent Isolated from Ticks: I. Isolation from Dermacentor Andersoni, Reactions in Animals, and Filtration Experiments, Pub. Health Rep. **53**: 2259-2267, 1938.

serums fixed complement with these antigens, although the antigens reacted in high titers with control serums from patients in known cases of typhus and spotted fever, respectively.

A control group of 14 serums collected at Amarillo in May and June, 1946 gave negative results. These serums were taken from the wives or mothers of 4 patients with Q fever, from 3 employees of a nearby packing company which apparently was not involved in the outbreak, from 4 office workers present at the time of the outbreak but presumably not exposed and from 3 butchers at the packing company who presumably were not exposed because they were employed shortly after the outbreak occurred. With one or two exceptions specimens of serum collected elsewhere gave negative results.

TABLE 2.—*Distribution of Cases of Q Fever at Amarillo, Texas, March 1946*

	Number of Suspect Serums Tested	Number of Serums with Diagnosis Serologically Confirmed
Packing plant	31	27
Auction company	3	3
Stockyards	21	19
Total	55	49

The occurrence of unrecognized illness or inapparent infection during the March outbreak possibly explains the titers obtained on serums from a small group of presumably exposed persons (table 4).

TABLE 3.—*Mean Complement Fixation Titers, by Weeks, After Onset of Illness*

	Week After Onset					
	1	2	3	4-5	6-7	11-15
No. of serums	4	15	7	19	14	4
Mean titer	<1:20	>1:80	>1:160	1:320	>1:320	>1:320

COMMENT

The complement fixation test for Q fever was utilized to good advantage in the investigation of the explosive outbreak of illnesses at Amarillo, Texas, in March 1946. From the results obtained it appears that the test is both sensitive and specific. It should be noted, however, that serums fixed complement only near the end of the acute phase of illness or in early convalescence. Our observations suggest that rising titers obtained from tests of serums taken during the first and third weeks after the onset of illness would indicate that the patient had Q fever. In this outbreak of Q fever the complement fixation test was of great assistance in retrospective diagnosis, since high titers persisted at least for a few weeks.

TABLE 4.—*Q Fever Complement Fixation Titers on Serums of Persons Presumably Exposed but Not Ill*

Serum	Occupation	Titer	Date
A. Ba.	Stock handler	1:320	5/2/46
E. G.	Sausage maker	1:640	5/2/46
J. L.	Tankage worker	1:40	5/2/46
D. O. N.	Stock handler	1:20	5/2/46
R. W.	Butcher	1:160	5/2/46
L. V.	Deliveryman and beef cooler	1:160	5/2/46

It should be emphasized that as a laboratory diagnostic aid the use of killed antigen in serologic tests is preferable to attempts to recover and identify Rickettsia burneti because of the extreme infectiousness of this agent in the laboratory.

Derrick [7] and Cox [2] originally found that the Weil-Felix test, which is of value in the laboratory diagnosis of certain other rickettsial diseases, gives negative results in Q fever. It was noted in a preceding report [8] in this series that all serums failed to react in the Weil-Felix test.

CONCLUSIONS

With serums collected from patients infected in the Amarillo outbreak of Q fever and tested by the complement fixation method it appeared that:

1. Titers were low as a rule during the first week of illness.
2. Subsequently the titers generally reached and maintained high levels at least for a few weeks.
3. The serologic observations indicated that the illnesses were Q fever.

Q FEVER IN THE UNITED STATES

IV. Isolation and Identification of Rickettsias in an Outbreak Among Stock Handlers and Slaughterhouse Workers

HERALD R. COX, D.Sc.
WALTER C. TESAR
Pearl River, N. Y.
and
J. V. IRONS, D.Sc.
Austin, Texas

The preceding papers of this series deal with the clinical, epidemiologic and serologic observations concerning an outbreak of Q fever that occurred in 1946 among stock handlers and slaughterhouse workers in Amarillo, Texas. The present report deals with the isolation and identification of the causative agent, Rickettsia burneti [1] (Rickettsia diaporica,[2] Coxiella burneti [3]), from the serums of 2 patients, T. E. M.[4] and R. W.,[5] both white men employed by the Western Stock Yards and the Pinkney Packing Company, respectively.

EXPERIMENTAL

Passage in Dilute Brown Agouti (dba) Mice.—Serum samples obtained from T. E. M. and R. W. during the acute phase of their illness on March 22 and 25, respectively, were diluted 1:10 with sterile isotonic solution of sodium chloride and inoculated in 0.5 cc. amounts into 4 mice of the dilute brown agouti strain (2 for each serum) by the intraperitoneal route. In none of the mice did there develop clinical signs of illness, nor did they show any abnormal gross pathologic condition when killed seven days later. Nevertheless, 10 per cent suspensions were prepared from their spleen

7. Derrick, E. H.: "Q" Fever, a New Entity: Clinical Features, Diagnosis and Laboratory Investigations, M. J. Australia **2**: 281-299, 1937.

8. Irons, J. V., and Hooper, J. M.: Q Fever in the United States: II. Clinical Observations in an Outbreak Among Stock Handlers and Slaughterhouse Workers, THE JOURNAL, this issue, p. 815.

From the Viral and Rickettsial Research Section, Lederle Laboratories Division, American Cyanamid Company, Pearl River, N. Y. (Dr. Cox and Mr. Tesar) and Director of Laboratories, Texas State Health Department (Dr. Irons).

1. Derrick, E. H.: Rickettsia Burneti—The Cause of "Q" Fever, M. J. Australia **1**: 14, 1939.

2. Cox, H. R.: Studies of a Filter-Passing Infectious Agent Isolated from Ticks: V. Further Attempts to Cultivate in Cell-Free Media; Suggested Classification, Pub. Health Rep. **54**: 1822-1827, 1939.

3. Philip, C. B.: Nomenclature of the Pathogenic Rickettsia, Am. J. Hyg. **37**: 301-309, 1943. Steinhaus, E. A.: Insect Microbiology, Ithaca, N. Y., Comstock Publishing Company, Inc., 1946, pp. 263 and 295.

4. In paper II of this series the case of T. E. M. is reported and illustrated (fig. 5).

5. In paper III of this series data on R. W. appears in table 4.

and brain tissues, and these were inoculated into a second series of the dilute brown agouti strain of mice by the intraperitoneal and intracerebral routes, respectively. After seven days the mice that received spleen tissue intraperitoneally were killed, and their spleens were passed by the intraperitoneal route to a third series of the same strain. Likewise, the mice that received brain tissue intracerebrally were killed and their brains passed by the intracerebral route to a third series.

Results in the Dilute Brown Agouti Strain of Mice.—The R. W. series of mice inoculated intracerebrally with brain passage material was discontinued after the third passage because none of the animals showed any signs of clinical illness or any abnormal gross pathologic conditions when they were killed on the seventh day. Furthermore, negative Q fever [6] complement fixation results were obtained with serum samples derived from the third passage mice just prior to their being killed. The Q fever antigen employed was prepared from a strain isolated in 1935 from Dermacentor andersoni in Montana—American Nine Mile strain.[6]

The R. W. series of mice inoculated intraperitoneally with spleen suspension showed greatly enlarged spleens, similar to those reported for Q fever in mice [6] in both the second and third passages. Rickettsial organisms identical to those described for Q fever [7] were also found in impression slides prepared from the third series mouse spleens stained by Machiavello's method.[8] Furthermore, serum derived from one of the third passage mice gave a positive (4 plus) Q fever complement fixation reaction in a 1:40 dilution (end point not determined).

The T. E. M. series of mice inoculated intracerebrally with brain passage material showed no gross or clinical evidence of Q fever infection until the third transfer, whereupon 1 of the mice showed a typically enlarged spleen. Typical rickettsia-like organisms were readily found in Machiavello-stained impression smears of the spleen, and the serum of this mouse gave a positive (4 plus) Q fever complement fixation reaction in a 1:40 dilution (end point again not determined).

The T. E. M. series of mice inoculated intraperitoneally with spleen suspension showed decidedly enlarged spleens in all three serial passages, beginning with the first transfer. Similarly, typical rickettsial organisms were found in impression slides prepared from spleen tissues of the third transfer.

Passage in Albino Swiss Mice and Guinea Pigs.—Five virus transfers were established from the previously described dilute brown agouti strain of mice to both albino Swiss mice and to guinea pigs. Two transfers were of the R. W. strain, using liver and spleen tissues, respectively, of the third intraperitoneal dilute brown agouti passage. The remaining three transfers were of the T. E. M. strain, these being a liver and spleen tissue passage, respectively, of the second intraperitoneal dilute brown agouti series and a liver tissue transfer of the third intraperitoneal dilute brown agouti series. The infection thus established has been readily maintained in Swiss mice by making transfers with spleen tissue injected intraperitoneally and in guinea pigs by passing blood or spleen tissue intraperitoneally or subcutaneously.

Results in Albino Swiss Mice and Guinea Pigs.—The gross pathology of the infection in Swiss mice and in guinea pigs is identical in all respects with that previously described for American Q fever in these animals.[6] Likewise typical rickettsias [7b] may be readily demonstrated in the spleen tissue of mice and guinea pigs as well as in the inflammatory exudate of the skin of guinea pigs injected by the subcutaneous route. In addition, the serums of guinea pigs convalescent from infection with either the R. W. or T. E. M. strain give positive complement fixation with Q fever antigen in dilutions as high as 1:2,048.

Cultivation in Developing Chick Embryos.—Both the R. W. and T. E. M. strains have been readily cultivated in series in the yolk sac tissue of the developing chick embryo.[9] The growth and staining properties are characteristic of those described for Q fever.[10]

COMMENT

A rickettsial agent apparently identical in all criteria to R. burneti, the causative agent of Q fever, was isolated from the serums of 2 naturally infected human subjects. The literature indicates that the guinea pig generally has been used for isolating R. burneti from human blood.[11] The work reported herein shows that the dilute brown agouti strain of mouse may be employed in place of the guinea pig with satisfactory results. This strain of mouse has been found to be of value in studies with murine typhus,[12] dengue fever,[13] Lymphogranuloma venereum [14] and Colorado tick fever.[15]

The recovery of Q fever rickettsias from 2 of the patients substantiates the epidemiologic, clinical and serologic observations made on the Amarillo epidemic.

SUMMARY

The isolation and identification of strains of Q fever from the serums of 2 naturally infected human subjects is described. The recovery of Rickettsia burneti in these cases substantiates the observations reported in the preceding papers of this series.

6. Davis, G. E., and Cox, H. R.: A Filter-Passing Infectious Agent Isolated from Ticks: I. Isolation from Dermacentor Andersoni, Reactions in Animals, and Filtration Experiments, Pub. Health Rep. **53**: 2259-2267, 1938.

7. (*a*) Burnet, F. M., and Freeman, M.: Experimental Studies on the Virus of "Q" Fever, M. J. Australia **2**: 299-305, 1937. (*b*) Cox, H. R.: A Filter-Passing Infectious Agent Isolated from Ticks: III. Description of Organism and Cultivation Experiments, Pub. Health Rep. **53**: 2270-2276, 1938. (*c*) Derrick, E. H.[1]

8. Zinsser, H., and Bayne-Jones, S.: Textbook of Bacteriology, ed. 8, New York, D. Appleton-Century Company, Inc., 1939, pp. 654-655.

9. Cox, H. R.: Use of Yolk Sac of Developing Chick Embryo as Medium for Growing Rickettsiae of Rocky Mountain Spotted Fever and Typhus Groups, Pub. Health Rep. **53**: 2241-2247, 1938.

10. Cox, H. R.: The Cultivation of Rickettsia Diaporica in Tissue Culture and in the Tissues of Developing Chick Embryos, Pub. Health Rep. **54**: 2171-2178, 1939.

11. Derrick, E. H.: "Q" Fever, a New Fever Entity: Clinical Features, Diagnosis and Laboratory Investigations, M. J. Australia **2**: 281-299, 1937. Dyer, R. E.: A Filter-Passing Infectious Agent Isolated from Ticks: IV. Human Infection, Pub. Health Rep. **53**: 2277-2282, 1938. Dyer, R. E.; Topping, N. H., and Bengtson, I. A.: An Institutional Outbreak of Pneumonitis: II. Isolation and Identification of Causative Agent, ibid. **55**: 1945-1954, 1940.

12. Moragues, V., and Pinkerton, H.: Fatal Murine Typhus Infection in the dba Strain of Mice, with Observations on Strain Variation in Susceptibility, J. Exper. Med. **79**: 35-40, 1944.

13. Sabin, A. B., and Schlesinger, R. W.: Production of Immunity to Dengue with Virus Modified by Propagation in Mice, Science **101**: 640-642, 1945.

14. Heilman, F. R.: The Effect of Penicillin on Experimental Infections with the Virus of Venereal Lymphogranuloma, Proc. Staff Meet., Mayo Clin. **21**: 237-240, 1946.

15. Koprowski, H., and Cox, H. R.: Adaptation of Colorado Tick Fever Virus to Mouse and Developing Chick Embryo, Proc. Soc. Exper. Biol. & Med. **62**: 320-322, 1946; read before the American Society of Tropical Medicine, Miami, Fla., Nov. 5, 1946.

THE KNOWLEDGE OF HUMAN VIRUS INFECTIONS OF ANIMAL ORIGIN

K. F. MEYER, M.D., Ph.D.
and
B. EDDIE, Dr.P.H.
San Francisco

Present day information on the viral agents is in a state of flux; changes in fact and in point of view occur in kaleidoscopic fashion, and there is considerable hesitancy to make final conclusions. Although numerous papers have been published, they are scattered throughout scientific journals and are not always readily accessible to the clinician. A brief summary of the knowledge of virus diseases having their origin in the animal kingdom therefore seems warranted. From the increasing number of diseases which belong to this group, rabies, psittacosis and arthropod-borne encephalitides were selected for presentation in this paper because of the peculiar action of the respective inciting agents on children.

RABIES

That rabies is a major public health problem is evidenced by the continuing demand for information and advice concerning its diagnosis and postinfectional treatment with vaccine as well as the planning of effective rabies-control programs. The knowledge that rabies is invariably fatal once it has developed makes it one of the most feared and notorious of diseases.

The usual mode of transmission from the rabid animal is by means of a bite, the resultant wound being contaminated with infected saliva during the act of biting. However, many consultations on the necessity of rabies treatment for human beings mention the occurrence of a scratch on the bare skin rather than a bite. Several authentic cases are recorded of rabies which developed after the hands had been licked by an infected animal. Babès and Vesilu,[1] in their experiments, failed to cause infection when street virus was rubbed into superficially produced scratches on human subjects. Pawan [2] found the saliva of bovines, horses and human beings suffering from paralytic rabies highly infectious to rabbits. He also comments that although a large number of persons have scooped up saliva from the mouth of rabid animals with their hands, on which superficial wounds could be seen, no one had contracted rabies through this practice.

It occasionally happens that a number of dairy patrons who are enthusiasts for raw milk consume that from a cow subsequently proved to have suffered from rabies. The pertinent question then arises: Should the persons who have ingested the milk be subjected to antirabic treatment? A careful perusal of available literature fails to uncover a single case of human rabies conclusively proved to have followed the ingestion of milk from a rabid cow or other animal. Experimental studies, furthermore, conclude that the milk of rabid animals contains the virus only when the glandular structures have been torn through mechanical injuries and a means of entry provided for the disease.

From the George Williams Hooper Foundation, University of California.

Read before the Section on Pediatrics at the Ninety-Fifth Annual Session of the American Medical Association, San Francisco, July 5, 1946.

1. Babès, V., and Vesilu, T.: L'infection ultérieure des plaies par le virus rabique, Compt. rend. Soc. de biol. **70**: 604-606, 1911.

2. Pawan, J. L.: Infectivity of the Saliva in Paralytic Rabies, Ann. Trop. Med. **31**: 267-270 (July) 1937.

PREVENTION OF HUMAN RABIES

If rabies is to be prevented in man following exposure, it is imperative to achieve an immunity sufficient to stop the multiplication of the virus in the nervous system.

Every biting dog or cat must be suspected of having rabies in an afflicted community. Each ensuing wound must be thoroughly cleansed with soap and water. When, in consultation with the veterinarian, the physician feels that a particular animal which has bitten a person has probably been or is now rabid, local treatment of the patient must be carried out by the physician. This must be done in order to inactivate any virus which may have been deposited with the saliva. Deep puncture wounds must be surgically exposed, and irrigation with a 20 per cent solution of medicinal soft soap, as recommended by Shaughnessy and Zichis,[3] instituted. Nitric acid, although an accepted chemical in the cauterization of bite wounds inflicted by rabid dogs, has proved impractical in caring for lacerations of the face.

The sanitary code of every modern health department contains provisions for the disposal of unowned, vicious and rabid dogs and for the confinement of animals to prevent the spread of rabies. No effort should be spared by the local health authorities to apprehend alive the dog that has bitten a person; it must be held under observation in a properly constructed kennel for a period of not less than two to three weeks. Even if the dog appears to have contracted rabies it should not be killed, since it is often impossible to demonstrate the characteristic Negri bodies in the brain of an animal prematurely killed in the early stages of the infection. If during the observation period the dog fails to show symptoms or to die, it is obviously unnecessary to begin vaccine treatment.

The physician is, as a rule, confronted by the problem of estimating the possibility of infection occurring in a bite victim; he must at the same time decide on the necessity for prophylactic treatment: two difficult decisions. Local treatment cannot be fully depended on, and since it takes several weeks for rabies to develop in man, the physician will decide to administer postinfectional vaccination as a safeguard.

It is well known that in rare instances the administration of rabies vaccine has resulted in a postpasteurian paralysis. The precise cause of this "treatment paralysis" is not known; it may be an allergic reaction to the nerve tissue protein injected. The number of these paralytic accidents or myelitides as a postvaccinal complication has greatly diminished since the introduction of the Semple vaccine. Piringer,[4] in a recent paper, reported that of 1,249 patients treated only 1, or 0.07 per cent, had developed postpasteurian myelitis. Experimental studies have shown that the subcutaneous injection of immune serum soon after the intramuscular injection of the virus does prevent the development of the disease in a significantly high percentage of infected mice. This type of treatment has not yet been subjected to clinical trial on man.

3. Shaughnessy, H. J., and Zichis, J.: Prevention of Experimental Rabies: Treatment of Wounds Contaminated by Rabies Virus with Fuming Nitric Acid, Soap Solution, Sulfanilamide or Tincture of Iodine, J. A. M. A. **123**: 528-533 (Oct. 30) 1943.

4. Piringer, W.: Myelitis post vaccinationem contra lyssam nach der Methode von Semple, Zentralbl. f. Bakt. (Abt. 1) **148**: 321-331 (March 26) 1942.

CONTROL OF RABIES

The Subcommittee on Rabies of the Committee on Animal Health, National Research Council, in a recent report (1945) has urged concerted action for the control of rabies. The report states that: "Rabies has gradually become more and more prevalent in the United States, because of the lack of a uniform policy and concerted action in combating the disease." The two procedures considered most efficacious—restraint and quarantine—have proved valuable in eliminating rabies from many communities, only to have the disease recur. It has therefore been recommended that a rabies control program be developed and coordinated on a nationwide scale either by the Bureau of Animal Industry, United States Department of Agriculture, or the United States Public Health Service.

Coordination is essential, since no quarantine control program can function effectually without a constantly alert dog pound and a staff of veterinary personnel adequate to supervise the impounding and effect the elimination of stray dogs. The licensing and taxation of dogs will provide the funds necessary to carry out the provisions of an enforcement act.

Preinfectional antirabic vaccination of dogs, when combined with other dog-control provisions, appears to be the most satisfactory method of assuring prompt recession of rabies. Now available are vaccines of superior potency, which can confer a high degree of immunity in a single subcutaneous injection of 5 cc. To promote public cooperation, vaccination of dogs should be performed free of charge. A voluntary program of canine vaccination in Massachusetts has freed that area from the disease for the first time since its introduction there in the eighteenth century. Alabama's experience with the program was similarly gratifying.

Annual vaccination of dogs is advisable until rabies has been eliminated from every state in the Union. While the disease prevails in a community it is important to recommend to the owners of cats that their pets be vaccinated by the three injection method. The bite of a rabid cat is frequently more dangerous than that of an infected dog.

Cooperation of the public is essential. To this end, an educational program which has the fullest support of the medical profession, and particularly the family physician, is urgently needed if the national control of rabies is to be successfully launched and the disease eventually vanquished.

PSITTACOSIS

Numerous clinical and etiologic studies have in recent years focused attention on those acute infectious pulmonary diseases which, for want of a better name, have been called "atypical pneumonias." Any pneumonia proved to be neither bacterial nor nonbacterial, uninfluenced by sulfonamide compounds and which fails to conform clinically to lobar pneumonia is diagnosed as "viral or virus pneumonia."

As investigation of the nature of the viral pneumonias progressed, it soon became evident that the clinical-pathologic entity of a pneumonitis could have a diverse etiology. As observations of the heterogeneous causation of the disease multiplied, it became imperative to establish, whenever possible, an etiologic diagnosis. This problem was solved with the aid of new virus technic; the complement fixation test was particularly helpful. These new research technics revealed that the sporadic and localized outbreaks of pneumonitis which were noted in certain sections of the country were caused by infection with strains of a virus belonging to the psittacosis-ornithosis group.

Psittacosis, once an obscure and rare disease thought to be contracted only by persons associated with parrots, attracted some attention in 1929 and 1930 when importations encouraged by panicky South American parrot dealers resulted in pandemic dispersal of the disease to twelve different countries.[5] The dealers, on learning of several deaths among the members of a theatrical troupe which used a parrot on the stage, had quickly disposed of their birds with the foregoing results.

The wide distribution of psittacosis-like infections throughout the animal kingdom has been established. Since 1931, one member after another has been indicted: latent infections were found in the parakeet-breeding establishments of the United States, Canada and European countries (see Meyer, 1942); the psittacine birds in Australia (Burnet[6]); the fulmar petrels of the Faroe Islands and Iceland (Haagen and Mauer,[7] 1939, and Bedson,[8] 1940); and in the wild and caged pigeon population of the United States (Meyer, Eddie and Yanamura,[9] 1942, and Smadel[10]); Great Britain (Andrewes and Mills,[11] 1943), and South Africa (Cole,[12] 1940). Canaries, finches,[13] chickens,[14] sea gulls and Peking ducks were also found to be infected (Eddie and Meyer[15]).

The virus parasitism of spontaneous psittacosis infection in birds is characterized at first by viremia in the young. Latent localization of the infection in the spleen, liver and kidney in the later stage leads to elimination of the infective agent in the fecal discharges over a prolonged period. Inhalation of desiccated bird droppings dispersed by aerial convection from cages, lofts and feathers constitutes the principal mode of transmission from birds to man.

Viral agents morphologically similar to the viruses of psittacosis have in recent years been isolated from the respiratory tracts of laboratory mice (Nigg,[16] Karr,[17] Hilleman and others[18]), ferrets,[19] cats and kittens (Baker,[20] 1942) and human beings who were sup-

5. Meyer, K. F.: The Ecology of Psittacosis and Ornithosis, Medicine **21**: 175-206 (May) 1942.

6. Burnet, F. M.: Enzootic Psittacosis Amongst Wild Australian Parrots, J. Hyg. **35**: 412-420 (Aug.) 1935.

7. Haagen, E., and Mauer, G.: Ueber eine auf den Menschen übertragbare Viruskrankheit bei Sturmvögeln und ihre Beziehung zur Psittakose, Zentralbl. f. Bakt. (Abt. 1) **143**: 81-88 (Dec. 30) 1938.

8. Bedson, S. P.: Virus Diseases Acquired from Animals, Lancet **2**: 577-579 (Nov. 9) 1940.

9. Meyer, K. F.; Eddie, B., and Yanamura, H. Y.: Ornithosis (Psittacosis) in Pigeons and Its Relation to Human Pneumonitis, Proc. Soc. Exper. Biol. & Med. **49**: 609-615 (April) 1942.

10. Smadel, J. E.: Atypical Pneumonia and Psittacosis, J. Clin. Investigation **22**: 57-65 (Jan.) 1943.

11. Andrewes, C. H., and Mills, K. C.: Psittacosis (Ornithosis) Virus in English Pigeons, Lancet **1**: 292-294 (March 6) 1943.

12. Cole, J. D. W. A.: Psittacosis in Domestic Pigeons, Onderstepoort J. Vet. Sc. **15**: 141-148 (July-Oct.) 1940.

13. Meyer, K. F., and Eddie, B.: Spontaneous Psittacosis Infections of the Canary and Butterfly Finch, Proc. Soc. Exper. Biol. & Med. **30**: 481-482 (Jan.) 1933.

14. Meyer, K. F., and Eddie, B.: Spontaneous Ornithosis (Psittacosis) in Chickens the Cause of a Human Infection, Proc. Soc. Exper. Biol. & Med. **49**: 522-525 (April) 1942.

15. Meyer, K. F., and Eddie, B.: Unpublished data.

16. Nigg, C., and Eaton, M. D.: Isolation from Normal Mice of Pneumotropic Virus Which Forms Elementary Bodies, J. Exper. Med. **79**: 497-510 (May) 1944.

17. Karr, H. V.: Study of Latent Pneumotropic Virus of Mice, J. Infect. Dis. **72**: 108-116 (March-April) 1943.

18. Hilleman, M. R.: Immunological Studies on the Psittacosis-Lymphogranuloma Group of Viral Agents, J. Infect. Dis. **76**: 96-114 (March-April) 1945.

19. Francis, T., Jr., and Magill, T. P.: An Unidentified Virus Producing Acute Meningitis and Pneumonitis in Experimental Animals, J. Exper. Med. **68**: 147-160 (Aug.) 1938.

20. Baker, J. A.: Virus Obtained from Pneumonia of Cats and Its Possible Relation to Cause of Atypical Pneumonia in Man, Science **96**: 475-476 (Nov. 20) 1942.

posed to have had no contact with birds or mammals (Eaton, Becks and Pearson,[21] 1941; Louisiana outbreak,[22] 1945). The ecology of these viruses remains an enigma, although it is suspected that the feline pneumonitis agent can be transmitted to man. It is of interest to note that no proved infections due to contact with laboratory mice are on record; in fact, the assumed risk of handling large breeding colonies of infected animals has not resulted in a single human psittacosis infection (Meyer and Eddie[15]).

The massive discharge of virus, a condition which might be expected from the known pathology of the disease (localization in focal lesions of the respiratory tract, without a productive cough) seldom occurs. There is convincing evidence, however, that a patient who is fatally ill with psittacosis contracted from an avian source will eliminate virus in large amounts and thus could initiate in the hospital the human to human transfer of psittacosis. Several reports of such incidents have been recorded; the consequences were disastrous (Meyer,[8] 1942, and Olson and Treuting,[22] 1944). It is imperative, therefore, that the physician remember that the occupational hazard to himself and to the attending nurses is considerable. Every human case of severe pneumonitis should be held in strictest isolation and should not be examined or treated without the protection of a face mask.

Despite these incidents, there is thus far no suggestion that a humanized strain of the psittacosis group of viruses has developed. It is noteworthy, in fact, that several cases of psittacosis or ornithosis originally reported with the accompanying statement "no contact with birds" upon careful epidemiologic search were found to have been connected with an unsuspected avian source. It requires little imagination and foresight to visualize the possible future development of various new sources and pathways of psittacosis infection, since it is now proved that the virus may be harbored in the intestinal tracts of chickens and ducks. The host range of psittacosis is today much more extensive than any one imagined it to be ten years ago. The significant fact is that contact with birds of the parrot or pigeon family is no longer an essential forerunner to the suspicion that a patient's illness is psittacosis or ornithosis.

In regard to the possible future direction of the disease from a biologic point of view, one must agree with Burnet[23] and Smadel's[10] theory that the potentiality of an independently spreading human infection does exist. It appears highly desirable to search for such a humanized strain. Ever since Gerlach's[24] demonstration of virus in the sputum of 4 patients who lacked the clinical symptoms of psittacosis the problem of the human virus carrier has possessed both practical and theoretic interest.

A résumé of circumstances which led to the discovery of a human being who had apparently remained a convalescent carrier of the psittacosis virus for eight years is as follows:

In 1938, A. M., a 36 year old biochemist, contracted a severe psittacosis infection while working in a room which contained a centrifuge where virus studies were in progress. Early in the course of the infection virus was demonstrated in the blood (on the second and sixth days) and in the sputum (on the third and sixth days). His convalescence was slow. A productive cough persisted, but a filtered sample of sputum proved noninfective. Annual reexamination of the blood serum invariably yielded a positive psittacosis complement fixation in titers varying from 1:128 to 1:256. A persistently high complement fixation titer with a psittacosis-lymphogranuloma agent as antigen furnishes strong presumptive evidence of the survival of virus in a recovered patient. In the eight years after his initial infection the virus was repeatedly isolated from a twenty-four hour specimen of sputum before and after treatment with penicillin.

A. M. was for five years in close daily contact with 20 to 30 susceptible persons; 8 of his associates were constantly exposed to the aerial droplet nuclei of his coughing spells, without consequence. Five infections resulting from continuous work with viruses of the psittacosis group did develop during the period that A. M. was away, serving with the Armed Forces. It is therefore reasonable to conclude that his contagiousness as a psittacosis carrier is, in the light of recent laboratory findings, of a low order. A comparative study of the strains isolated from the carrier will be published in the near future. There is little or no convincing evidence that the strain acquired new properties.

DIAGNOSIS OF PSITTACOSIS IN CHILDREN

The observations which follow especially deserve the interest of the pediatrician. The laboratories at the Hooper Foundation have from time to time during the past five years been called on to aid in the diagnosis of cases of pneumonitis. Many thousands of serum specimens have been submitted for use in making complement fixation tests in the presence of the psittacosis antigen. Tentative classification of case histories and serologic data records a total of 228 psittacosis cases with 21 deaths, or a mortality rate of 9.3 per cent for the five year period. The exact nature of the infection was proved in 52 cases (22 per cent) when the virus was isolated from the sputum or from the organs at autopsy. The infections were definitely linked with exposure to birds in 219 histories, nearly one half of them after contact with psittacine species. Over 80 infections were connected with pigeons, while ducks, canaries, chickens and even grouse were also suspected as sources. The importance of infected parakeets and parrots as vectors cannot be overestimated; despite the various repeated attempts to control this source of psittacosis, it remains a prime infectional fount.

In performing laboratory diagnoses of submitted pneumonitis cases, samples of patients' serums were studied for antibodies against the psittacosis virus by a routine technic previously described.[25] Because of its close antigenic relationship to the psittacosis virus, the commercial antigenic form of the lymphogranuloma

21. Eaton, M. D.; Becks, M. D., and Pearson, H. E.: Virus from Cases of Atypical Pneumonia: Relation to Viruses of Meningopneumonitis and Psittacosis, J. Exper. Med. **73**: 641-654 (May) 1941.

22. Olson, B. J., and Treuting, W. L.: An Epidemic of a Severe Pneumonitis in the Bayou Region of Louisiana: I. Epidemiological Study, Pub. Health Rep. **59**: 1299-1311 (Oct. 6) 1944. Olson, B. J., and Larson, C. L.: An Epidemic of a Severe Pneumonitis in the Bayou Region of Louisiana: V. Etiology, ibid. **60**: 1488-1503 (Dec. 14) 1945.

23. Burnet, F. M.: Virus as Organisms, Harvard University Monograph in Medicine and Public Health, no. 8, Cambridge, Mass., Harvard University Press, 1945.

24. Gerlach, F.: Menschen als Psittakosevirusträger nach "stummer" Infektion mit Psittakosevirus, Ztschr. f. Hyg. u. Infektionskr. **118**: 709-723 (Sept.) 1936.

25. Meyer, K. F., and Eddie, B.: The Value of the Complement Fixation Test in the Diagnosis of Psittacosis, J. Infect. Dis. **65**: 225-233 (Nov.-Dec.) 1939.

virus has been included in these routine tests during the past two years. It has been amply demonstrated that the coreactions of psittacosis virus with this particular preparation are irregular. The true etiologic nature of the pneumonitis would have been missed had the lymphogranuloma antigen been used as the sole reagent for detecting antibodies in the serums of patients. Even the concentrated and properly standardized lymphogranuloma antigen failed to give complement fixation reactions when serums derived from patients with bacteriologically proved psittacosis or ornithosis were used.

Unfortunately, the clinical histories furnished by physicians were frequently incomplete; only in 111 cases were ages listed. Persons of middle age and juveniles were involved but no children in the age group 1 to 9 years. This is not surprising, since previous experience had indicated that even if children of this youthful group were intimately exposed to the same birds which had infected their parents or older relatives, clinical infections had rarely resulted. Of the 160 psittacosis infected patients of known age in Germany, only 2 were under 10 years of age. These statistics are based on household infections in which clinical similarity rather than serologic or etiologic evidence had decided the diagnosis.

The age group 10 to 19 is known to be susceptible to a mild form of psittacosis. Since 15 of the 111 histories refer to psittacosis infections in this age group, it would perhaps be of interest to analyze the motivating evidence which led to the submission of specimens of serum for examination. The accompanying table may be of assistance to pediatricians.

Psittacosis in Young Age Group

Case; Year	State	Age; Color; Sex	Clinical History	Contact with Birds	Complement Fixation Test: Early Serum: Titer Psittacosis	Early Serum: Titer L. G. V.*	Early Serum: Week	Late Serum: Titer Psittacosis	Late Serum: Titer L. G. V.*	Late Serum: Week	Isolation of Virus
1. R. D. 1940	Calif.	14 white male	Fever; infiltration right lower lobe	Canaries; boy scout camp	—	—	—	1:32 ++++, 1:64 +++	—	3d	Not attempted
2. C. B. 1941	Calif.	14 white male	Respiratory infection at frequent intervals	Cared for white king-pigeons	—	—	—	1:32 ++++	..	20th (after pigeons destroyed)	Not attempted
3. M. M. 1943	Mass.	16 white female	Pneumonia with pleural effusion; cold agglutinins	No definite exposure	1:2 ++++	—	1st	1:256, 1:16 ++++	..	2d 3d	Not attempted
4. W. S. 1944	Mass.	14 white male	Consolidation left lower lobe	Caught pigeon which died 7 days before onset	1:8 ++++	—	1st	1:16 ++++	—	3d	Not attempted
5. G. F. 1944	Calif.	14 white male	Pneumonia, acute	Nursed sick bird, boy scout camp	0 ++++	—	1st	1:4 ++++	—	3d (at autopsy)	Virus isolated, lung and spleen
6. I. H. 1944	Iowa	15 white male	Fever for 4 days, no productive cough and pneumonitis right lower lobe	Bitten by parrot 14 days before onset	—	—	—	1:256, 1:512 ++++	1:2 +	4th 7th	Virus liver and spleen from parrot
7. M. S. 1944	Pa.	17 white female	Mild pneumonia; father died from ornithosis (sections typical)	Sick pigeons in loft	—	—	—	1:32 ++++	—	4th	Not attempted
8. R. S. 1945	Pa.	15 white male	Mild pneumonia; father died from ornithosis (sections typical)	Sick pigeons in loft	—	—	—	1:8 ++++	—	2d	Not attempted
9. E. G. 1945	Iowa	13 white female	Fever; consolidated areas	Exposed to parrot 3 weeks before onset	1:4 ++++, 1:8 +++	1:4 +	10th	1:16 ++++, 1:16 ++++	1:2 + 1:8 ++++	3d 5th	Not attempted
10. F. K. 1945	Pa.	16 white male	Fever, mumps, facial edema; no response to penicillin	No definite exposure	—	—	—	1:16 ++++	1:4 ++++	3d	Not attempted
11. M. S. 1945	N. C.	16 white male	Virus pneumonia	Raised homing pigeons	—	—	—	1:8 ++++, 1:16 ++	—	10th	Not attempted
12. A. N. 1945	Utah	14 white male	Fever; chest cold	Exposed to parrakeets	1:4 ++++	1:4 ++++, 1:8 ++	2d	1:16 ++++	—	4th	Not attempted
13. G. P. 1945	N. Y.	11 white male	Virus pneumonia and bacillary dysentery	Exposed to infected pigeons and chickens at a cottage school	—	—	—	1:2 +++	0	20th	Virus isolated from sputum (1st week of illness)
14. E. G. 1945	N. Y.	13 white female	Fever for 4 days, rales	Exposed to infected pigeons and chickens at a cottage school	1:16 ++++	1:2 ++++	4th	—	—	—	Not attempted
15. S. H. 1945	N. Y.	9 white male	Atypical pneumonia	Exposed to infected pigeons and chickens at a cottage school	1:16 ++++	1:2 ++++	?	—	—	—	Not attempted

* L. G. V., lymphogranuloma venereum.

Close cooperation between the virus diagnostic laboratory and the clinician is vital. The serologic tests which had been requested by the physician furnished no conclusive evidence that the pneumonitis afflicting the 15 children was etiologically connected with a virus of the psittacosis group. The existence of latent infections was, however, indicated. Study of the case histories of the children only served to emphasize the difficulties often encountered in attempting to establish

proof of recent infection with a virus of the psittacosis group. Particularly in children who are liable to subclinical infections, the demonstration of complement-fixing antibodies capable of reacting with psittacosis antigens in a single sample of convalescent serum must be considered inadequate. The mere demonstration of antibodies which have evidently persisted in the blood serum over a long period of time constitutes proof which is inadequate to justify the unreserved linking of pneumonitis with a psittacosis viral agent. It is imperative that in the future at least two criteria be adopted in the diagnosis of psittacosis: (1) isolation of the virus from the blood or sputum during the acute phase of the disease and (2) the demonstration of a significant rise in titer in complement-fixing antibodies. Blood collections taken during the acute phase of the disease may be of diagnostic assistance if used in making animal inoculations and serologic tests. Certainly, no effort should be spared in the attempt to isolate the virus. Modern technics which destroy concomitant bacteria encourage the use of nasal or throat washings, should the nonproductive cough fail to yield suitable specimens. Again, vomitus or gastric lavage specimens may be successfully injected into mice and examined for virus. In their present form, procedures for the isolation of virus are time-consuming and consequently furnish an etiologic diagnosis in retrospect. Repeated examination of serum samples collected during the first week of illness for complement-fixing antibodies may supply suggestive information. A twofold to fourfold increase in titer, for example from 1:2 to 1:8 ++++, together with objective signs of a pulmonary involvement warrants an early tentative diagnosis of psittacosis and the prompt institution of specific therapy.

TREATMENT OF PSITTACOSIS INFECTIONS WITH PENICILLIN

Heilman and Herrell [26] have produced evidence that experimental psittacosis in the mouse responds to treatment with penicillin. The results obtained by Parker and Diefendorf [27] in testing the effect of the antibiotic on the multiplication of meningoencephalitis virus were not nearly so impressive as those obtained by Heilman and Herrell and still more recently by Bedson and May.[28] The workers at the Hooper Foundation, treating experimentally infected mice and ricebirds as well as spontaneously infected pigeons, have obtained encouraging results. The outcome was convincing in mice, provided treatment of the nasally infected animals was instituted early in the course of the infection and the antibiotic was used in large doses. Six ricebirds recovered from the infection under penicillin treatment, after having received 6,000,000 units intramuscularly and subcutaneously injected over a period of seventeen days. One ricebird died from psittacosis within twenty-two days and another within twenty-seven days, while the remaining 4 were proved to be carriers when they were killed on the fifty-ninth day after the completion of the treatment. The treatment of the spontaneously infected pigeons was complicated by a secondary invasion of Salmonella typhi murium, and definite evidence of the curative value of penicillin could not in this instance be secured.

Successful treatment of human psittacosis or ornithosis infection with penicillin has been reported by Turgasen,[29] Flippin, Gaydosh and Fittipoldi,[30] and has been communicated to us by others. An opportunity was afforded at the Hooper Foundation to conduct, under careful supervision, the penicillin treatment of 3 infections incurred in the laboratory. The psittacosis virus was demonstrated in the blood of the 3 victims and in the sputum of 1. One of the cases studied is that of patient D. W. Therapy was instituted on the sixth day of this patient's illness. She became afebrile after the initial administration on that day of 80,000 units of penicillin, followed during the next twenty-four hours by 160,000 units. Treatment was continued for six days on the large dosage, was reduced for one day to 110,000 units and finally reduced for two days to 80,000 units.

In patient M. H., more severely infected, treatment commenced on the tenth day of the disease and showed symptomatic and clinical improvement forty-eight hours later, following the administration on the first day of 220,000 and on the second day of 320,000 units of penicillin. On the third day after therapy had started the patient became afebrile and remained so. The dosage, though gradually decreased, was continued for ten days. The immunity response, as expressed in the rise of complement-fixing antibodies, was prompt. It seems worth while to state that at the end of ten months the titers of both patients dropped to 1:8 ++++. This definite decline in complement-fixing antibodies justifies the conclusion that the tissues had been largely freed of the viral agent. Whether this result was brought about by the antibiotic or by the immunity mechanism of the patients remains a matter of conjecture. It should be emphasized at this point that mice infected with psittacosis viral agents and successfully treated with penicillin are immune and become carriers (Heilman and Herrell, Bedson and May and Eddie and Meyer).

These observations suggest that when the virus is inside the cells it is protected against penicillin and that only in the extracellular phase, when it is not actually multiplying, is the disease agent apparently susceptible to the antibiotic. The action which takes place is bacteriolytic as well as bacteriostatic. The ultimate destruction of the surviving phagocytized psittacosis viral agent depends on the enzyme action of the parasitized cells, i. e., the immunity mechanism of the host. Early damage to the mechanism in mice renders their recovery from experimental psittacosis relatively difficult. The infection progresses slowly in the ricebird, and consequently penicillin therapy is effective. However, since the immunity mechanism develops slowly treatment must be prolonged for several weeks in order to prevent relapses.

Serious relapses have in several instances resulted from the inadequate treatment of human psittacosis infections. Small doses of penicillin continued for only two or three days after the patient has become afebrile have been found to be ineffective. The dynamic action of penicillin on the psittacosis virus specifies a high

26. Heilman, F. R., and Herrell, W. E.: Penicillin in Treatment of Experimental Ornithosis, Proc. Staff Meet., Mayo Clin. **19**: 57-65 (Feb. 9) 1944; Penicillin in Treatment of Experimental Psittacosis, ibid. **19**: 204-207 (April 19) 1944.

27. Parker, R. F., and Diefendorf, H. W.: Effect of Penicillin on Certain Viruses, Proc. Soc. Exper. Biol. & Med. **57**: 351-354 (Dec.) 1944.

28. Bedson, S. P., and May, H. B.: Penicillin in Experimental Psittacosis of Mice, Lancet **2**: 394-397 (Sept. 29) 1945.

29. Turgasen, F. E.: Human Ornithosis Treated with Penicillin, J. A. M. A. **126**: 1150-1151 (Dec. 30) 1944.

30. Flippin, H. F.; Gaydosh, M. J., and Fittipoldi, W. V.: Treatment of Human Psittacosis with Penicillin, J. A. M. A. **128**: 280-281 (May 26) 1945.

dosage level administered in rapid succession early in the course of the infection in order to cut the number of viral elements to a low level and permit the normal defense mechanism of the body to dispose of the few stragglers. Adherence to these principles will greatly reduce the now unduly high human case fatality rate from psittacosis and will prevent the future development of virus carriers.

ARTHROPOD-BORNE VIRUS TYPES OF ENCEPHALITIS

Shortly after the virus of Western equine encephalomyelitis was isolated from the brain of horses,[31] human infections were noted in persons who worked in close association with infected animals.[32] Conclusive proof of this was not forthcoming until 1938 when Howitt [33] in California and Fothergill, Dingle, Farber and Connerley [34] and Webster and Wright,[35] all working in Massachusetts, isolated the viruses of equine encephalomyelitis from the brain tissues of patients in fatal cases. Since then the Manitoba (Canada),[36] Minnesota and Dakota epidemics of 1940, and the annual outbreaks in the Yakima Valley [37] and in Kern and Fresno counties in California [38] have attested to the ever increasing importance of this disease.

Surveys taken in many other regions, using neutralization tests on blood serum specimens, have demonstrated the existence there of previously unrecognized infections.[39] These studies disclosed the important fact that the virus of the St. Louis type of encephalitis was frequently active in the same areas. The significance of these observations became clear when Hammon and his associates [40] demonstrated the existence of the virus of both Western equine encephalomyelitis and St. Louis encephalitis in the Culex tarsalis mosquito of the endemic territories. The prevalence of these infections during the season of high temperature in areas subject to agricultural irrigation and periodic flooding of streams—both procedures conducive to extensive breeding of the mosquito—is thus readily explainable. Additional investigations by the same workers have given credence to the possibility that in certain regions fowls, and perhaps other birds, serve as virus-infective sources for mosquitoes. It is important to realize that contact with horses is without consequence to man and that mosquitoes in all probability acquire the viral agent by feeding on birds with subclinical virus infections.

Clinically and epidemiologically the equine and St. Louis types of encephalitis have a great deal in common. In fact, an accurate etiologic diagnosis cannot be made without laboratory aids. Furthermore, in regions where seasonal epidemics of poliomyelitis and encephalitis simultaneously make their appearance, the differential diagnosis of apparent virus infections of the central nervous system requires constant consultation with the laboratory. Nearly 50 per cent of the cases defy differential etiologic diagnosis, even with the best possible cooperation.

Experience [41] has taught that in the majority of the endemic areas the morbidity due to Western and Eastern equine virus is highest in children under 5 years of age. The problem of the arthropod-borne encephalitides thus enters the field of pediatrics.

The actual incidence of these infections is not definitely known, but data available from the annual encephalitis epidemics in Yakima Valley, Washington, reveal between 26 and 58 accurately diagnosed cases, while in Kern County, California, the number is estimated to be as high as 150; in Fresno county it approaches 100. Fatality rates for both infections vary between 3 and 22 per cent. They are particularly high in the age groups below 2 and above 50. In infants the sudden onset of fever followed by vomiting, twitching, strabismus, stiff neck, convulsions and cyanosis characterizes the clinical picture. Proper treatment may bring about complete recovery within a few days, or death may occur within forty-eight hours after onset. Permanent residual cerebral damage with blindness and epileptiform seizures is not uncommon in infants under 6 months of age.

The course of the disease is variable but destructive in children over 3 years of age. Encephalitic syndromes such as fever, headache, slow mental and motor response, aphasia and tremors, are common in the severe type. The observations with respect to the cellular elements in the spinal fluid may be similar to those of poliomyelitis. A final and specific etiologic diagnosis is usually made by serologic tests. The neutralization test is customarily used, but it is hoped that a complement fixation test may in time prove useful, since results may be obtained rapidly even in specimens of blood serum which have been carelessly collected and poorly handled. Convalescence from the disease is

31. Meyer, K. F.; Haring, C. M., and Howitt, B.: The Etiology of Epizootic Encephalomyelitis of Horses in the San Joaquin Valley, 1930, Science **74:** 227-228 (Aug. 28) 1931.

32. Meyer, K. F.: A Summary of Recent Studies on Equine Encephalomyelitis, Ann. Int. Med. **6:** 645-654 (Nov.) 1932.

33. Howitt, B. F.: Recovery of the Virus of Equine Encephalomyelitis from the Brain of a Child, Science **88:** 455-456 (Nov. 11) 1938.

34. Fothergill, L. D.; Dingle, J. H.; Farber, S., and Connerley, M. L.: Human Encephalitis Caused by the Virus of the Eastern Variety of Equine Encephalomyelitis, New England J. Med. **219:** 411 (Sept. 22) 1938.

35. Webster, L. T., and Wright, F. H.: Recovery of Eastern Equine Encephalomyelitis Virus from Brain Tissue of Human Cases of Encephalitis in Massachusetts, Science **88:** 305-306 (Sept. 30) 1938.

36. Adamson, J. D., and Dubo, S.: Clinical Findings in Encephalitis (Western Equine), Canad. Pub. Health J. **33:** 288-300 (June) 1942. Donovan, C. R., and Bowman, M.: Some Epidemiological Features of Poliomyelitis and Encephalitis, Manitoba, 1941, ibid. **33:** 246-257 (June) 1942. Medovy, H.: Western Equine Encephalomyelitis in Infants, ibid. **33:** 307-312 (June) 1942.

37. Hammon, W. M.: Encephalitis in the Yakima Valley: Mixed St. Louis and Western Equine Types, J. A. M. A. **117:** 161-167 (July 19) 1941; correction, ibid. **117:** 802 (Aug. 30) 1941. Hammon, W. M.; Reeves, W. C.; Benner, S. R., and Brookman, B.: Human Encephalitis in the Yakima Valley, Washington, 1942, ibid. **128:** 1133-1139 (Aug. 18) 1945.

38. Buss, W. C., and Howitt, B. F.: Human Equine Encephalomyelitis in Kern County, California, 1938, 1939 and 1940, Am. J. Pub. Health **31:** 935-944 (Sept.) 1941. Howitt, B. F.: Viruses of Equine and of St. Louis Encephalitis in Relationship to Human Infections in California, 1937-1938, ibid. **29:** 1083-1097 (Oct.) 1939.

39. Hammon, W. M.; Lundy, H. W.; Gray, F. A.; Evans, F. C.; Bang, F., and Izumi, E. M.: A Large-Scale Serum-Neutralization Survey of Certain Vertebrates as Part of an Epidemiological Study of Encephalitis of the Western Equine and St. Louis Types, J. Immunol. **44:** 75-86 (May) 1942.

40. Hammon, W. M., and Reeves, W. C.: Laboratory Transmission of Western Equine Encephalomyelitis Virus by Mosquitoes of the Genera Culex and Culiseta, J. Exper. Med. **78:** 425-434 (Dec.) 1943; Culex Tarsalis Coquillett a Proved Vector of St. Louis Encephalitis, Proc. Soc. Exper. Biol. & Med. **51:** 142-143 (Oct.) 1942; Laboratory Transmission of St. Louis Encephalitis Virus by Three Genera of Mosquitoes, J. Exper. Med. **78:** 241-253 (Oct.) 1943. Hammon, W. M.; Reeves, W. C., and Gray, M.: Mosquito Vectors and Inapparent Animal Reservoirs of St. Louis and Western Equine Encephalitis Virus, Am. J. Pub. Health **33:** 201-207 (March) 1943. Bang, F. B., and Reeves, W. C.: Mosquitoes and Encephalitis in the Yakima Valley, Washington: III. Feeding Habits of Culex Tarsalis Coquillett, a Mosquito Host of the Viruses of Western Equine and St. Louis Encephalitis, J. Infect. Dis. **70:** 273-274 (May-June) 1942. Reeves, W. C., and Hammon, W. M.: Feeding Habits of the Proved and Possible Mosquito Vectors of Western Equine and St. Louis Encephalitis in the Yakima Valley, Washington, Am. J. Trop. Med. **24:** 131-134 (March) 1944. Hammon, W. M.; Reeves, W. C.; Brookman, B., and Gjullin, C. M.: Mosquitoes and Encephalitis in the Yakima Valley, Washington: V. Summary of Case Against Culex Tarsalis Coquillett as a Vector of the St. Louis and Western Equine Viruses, J. Infect. Dis. **70:** 278-283 (May-June) 1942. Hammon, W. M.; Reeves, W. C., and Galindo, P.: Epidemiologic Studies of Encephalitis in the San Joaquin Valley of California 1943, with the Isolation of Viruses from Mosquitoes, Am. J. Hyg. **42:** 299-306 (Nov.) 1945.

(Footnote 40 continued in next column)

41. Hammon, W. M.: The Epidemic Encephalitides of North America, M. Clin. North America **27:** 632-650 (May) 1943.

usually prolonged, though residual manifestations are less frequent in the latter group of children than in infants.

Demonstration of the viral antibodies in a single sample of convalescent serum was formerly considered adequate for diagnosis. Evidence of this nature is no longer considered to be conclusive. Since antibodies to the St. Louis or equine encephalitis virus have been demonstrated in a large percentage of the normal population in regions where the infections are endemic, it is imperative that two specimens be made available in order to detect any significant rise in the antibody titer which may take place during the time elapsing from the onset of the acute phase of the disease to the end of the convalescent period. The virus has in rare instances been isolated from the spinal fluid or blood. It is more frequently demonstrated in the brain tissues of patients surviving for six days or more after the onset of their illness.

While treatment of the encephalitides must be entirely symptomatic, the prevention of the equine type in susceptible persons may be accomplished through the use of a vaccine produced from virus propagated in a developing chick embryo. This vaccine consists of a fine suspension of virus-bearing chick embryo tissue inactivated by solution of formaldehyde. Since there is no cross protection between the different types of encephalitis vaccines, it is necessary to produce vaccines for each type of virus. Unfortunately, no vaccines are at present available for human use.

There is seldom valid reason to recommend the vaccination of the entire group of most susceptible human beings in a community against encephalitis. The use of modern mosquito control procedures, at least in the United States, should afford better protection against all the arthropod-borne neurotropic virus infections than can specific vaccination against one particular virus. Methods of control for the principal mosquito vectors are now the subject of an intensive study being carried on by the California State Department of Public Health under a grant from the state legislature. A program of this kind must be twofold, embracing both fact finding and direct field control by experiment.

In the three types of infection discussed briefly in this paper, vector control constitutes the most effective weapon which can be forged to prevent the injuries induced by accidental aberrant parasites. Further research in this field can help to conquer the element of chance in one phase of human life.

University of California Medical Center, San Francisco 22.

ABSTRACT OF DISCUSSION

Dr. Robert F. Korns, Albany, N. Y.: I would like to congratulate Dr. Meyer and Miss Eddie on this enlightened review of the subject, particularly the new information on psittacosis, that gives a little more insight into the epidemiology of this disease. My purpose is to give you the experience accumulated in New York state on two of these diseases: namely rabies and psittacosis. The arthropod borne encephalitis has never been identified there. With respect to rabies, I agree with everything that Dr. Meyer has said on the subject and can confirm the immense increase in rabies as exemplified in New York state. Last year there were close to 700 cases reported. It is hoped that the situation will be improved. A mass dog immunization program has been embarked on. Thus far, there has not been accumulated enough information to offer a conclusive answer on the question of the value of this procedure, but it has been helped by a change in the state law last year which allowed the Commissioner of Health to designate areas in which rabies existed where vaccinated dogs would be allowed at large; the Commissioner felt that dogs could be allowed at large that have been adequately vaccinated. Many New York counties have embarked on this dog vaccination program on a voluntary basis and, to date, eight of them have completed such programs, vaccinating over 90 per cent of the dogs enumerated in the counties on an entirely voluntary basis. Preliminary analysis indicates that the attack rate in vaccinated dogs worked out on the basis of dog months and exposure to rabies in a community where it exists and dealing only with licensed dogs to avoid the difficulty with the stray animals and underenumeration, the attack rate in vaccinated dogs has been calculated as 4.5 per 100,000 dog months of exposure. When this is done for the nonvaccinated dog population in the same areas, a figure of 23.6 per 100,000 dog months of exposure is arrived at, roughly five times as great. Again, these figures are tentative. I don't want to imply that the vaccination of dogs is the whole story, but it is to my mind very worth while. I wish to comment also on the psittacosis group. We have been jointly concerned with several investigations in New York state, and one study in particular furnishes some new information. Dr. Meyer mentioned the occurrence of the disease in ducks. This had not been previously reported and I want to tell you of the occurrence of the disease in Long Island during the past year. About April 1945 Dr. William Wolins in Riverhead had a case of an atypical pneumonia which puzzled him, and he thought that it might be psittacosis. He sent serums to Dr. Meyer, by whom the diagnosis was confirmed. Later, search was made for additional cases and the interesting observation was that the carrier was a duck handler. Long Island is famous for ducks. There are 7 million ducks coming out of that island annually. A search revealed about 19 cases of atypical pneumonia having the same clinical picture, rather mild for the most part, in duck handlers. Only 10 of these demonstrated serologic evidence of psittacosis. The epidemiologic evidence implicated duck handlers since in only 2 of these cases the patients did not have intimate contact with ducks. Furthermore, serologic survey of duck handlers versus nonduck handlers showed the contradiction there. Of over 100 ducks examined by Dr. Meyer and Miss Eddie, 34 per cent of them have shown a virus of the psittacosis group. Furthermore, 3 of 7 sea gulls showed the virus. Evidently the disease has been existing in ducks in Long Island for many years and has only recently been discovered.

Dr. Gilbert J. Levy, Memphis, Tenn.: Dr. Meyer, what is the longest incubation period of rabies in man? I had a patient, a child, who had been bitten two years previously by a rabid cat. Is this possible?

Dr. Karl F. Meyer, San Francisco: I would like to answer this question. According to my personal observation the longest incubation time in rabies was three hundred and sixty-seven days. The particular person had been bitten by a rabid cat unknown to her. She spent a vacation in one of the summer resorts and came down with a bizarre disease which later was identified at autopsy as rabies. I am sorry that Dr. Korns from New York had to smear his own state with duck psittacosis. I would like to remove that stigma and say that we have it in California as well. A study has just been completed in which it was shown that 3 of 11 ducks obtained from the chicken town, Petaluma, contained the psittacosis virus. I don't want to create now a great deal of fear that you shouldn't eat any ducks. You probably have done it a great many times and have never contracted psittacosis, but it is worth while to keep in mind that this new reservoir of psittacosis is enormous. There are indications that children playing with ducks contract mild infections from this source.

CHOICE OF ANESTHESIA IN ORTHOPEDIC SURGERY

CAPTAIN JOHN B. DILLON
Medical Corps, Army of the United States

There are no surgical patients who present more diverse conditions than those met by the orthopedist, and there are few patients who present greater problems to the anesthetist.

The day has passed when it can be said that one or two anesthetic procedures will cover all cases. The development of special surgical technics not only necessitates the development of special anesthetic technics but depends on their development.

The anesthetist has a dual responsibility. First, he has an obligation to the patient to see to it that the patient suffers no damage or at least minimal damage from the anesthesia and if possible that the patient is in better physical condition than he was prior to entering the operating room. Second, he has an obligation to the surgeon, namely, to provide the type of anesthesia that will enable the surgeon to accomplish the procedure at hand with no added difficulty. Ideally, the surgeon should be able to request an anesthetic and then forget that problem entirely. Unfortunately this ideal situation now exists in relatively few localities, but it will spread as the importance of anesthesia in the order of surgical technics is realized and more men are attracted to it as a specialty.

It is not possible categorically to state that certain anesthetic procedures are better than others for certain orthopedic problems. The anesthetic of choice depends on many factors. The age, the physical and psychologic condition of the patient, the condition to be corrected, the facilities, the explosion hazards and the local custom must all be taken into consideration.

Proper preoperative care is many times more important than the use of any particular anesthetic agent.

It should be thoroughly established before an anesthetic is administered that the patient is not in shock or, if shock is present and an anesthetic must be administered (a condition rarely justifiable), that active measures have already been taken to overcome the shock.

It should be determined that the patient has not eaten or taken a quantity of fluid within six hours before inhalation anesthesia is started. If either has been ingested the stomach should be emptied prior to anesthesia, for it will empty during either induction or emergence, and this is a source of many anesthetic complications.

Preoperative medication is of major importance for all patients who are to receive an anesthetic. The basis of a smooth anesthetic rests on the adequacy of premedication, and either insufficient or excessive dosage can greatly complicate the procedure. The drugs and dosages used vary with the age, weight, psychic state and metabolic peculiarities of the patients. I do not ordinarily use a narcotic for patients under 12 years of age. For these patients ½ to 1½ grains (0.03 to 0.1 Gm.) of seconal sodium with from 1/400 to 1/150 grains (0.00016 to 0.0004 Gm.) of atropine has proved satisfactory. In patients of an age range from 12 to 60 pentobarbital sodium or seconal sodium, scopolomine hydrobromide and morphine, codeine or other narcotics are used, depending on the factors previously mentioned. For those patients over 60 whose metabolic processes have slowed, the dosages are reduced and the use of codeine or Demerol hydrochloride is preferred because they have the least tendency to depress respiration.

In emergency cases and occasionally in elective cases the premedication is administered intravenously, the dosages being adjusted to meet the increased rate of action.

An elective surgical procedure should not be started until it has been determined that whole blood is available in adequate amounts. In emergency cases the blood of all patients should be cross matched on admission. Blood is not expensive therapy; rather, it is probably the cheapest, because there is no doubt that 1 or 2 pints (500 to 1,000 cc.) of whole blood will so reduce convalescence that shorter hospitalization will more than make up for its cost. There is no branch of surgery in which blood is more frequently needed than in orthopedic surgery because of the large number of emergency cases, the length of many of the operations and the difficulty of securing complete hemostasis in bone work. Finally, facilities should be available to prevent the occurrence of hypoxemia. Too often it is the so-called "simple case" for which none of these precautions or safety measures have been arranged which results in disaster. There is no "simple case."

In pediatric orthopedics, generally speaking, it would seem that inhalation anesthesia is the most desirable. There are cases in which local anesthesia may be used. A few locals have been successfully done for the reduction of green-stick fractures of one bone of the forearm in patients less than 10 years of age. For manipulations, reduction of fractures involving overriding of long bones and in cases requiring surgical intervention, open drop ether or vinethene is used if the time required is to be short. Oxygen may be added by means of a catheter beneath the mask. If it is necessitated by the position of the patient, an endotracheal tube may be passed to insure an adequate and absolutely patent airway. The ordinary gas machine has too much dead space, permitting the accumulation of excessive amounts of carbon dioxide, to be used on patients below the age of approximately 10 years. There is a real need for a "children's machine" in every hospital. Although it is used in many localities, I do not use ethyl chloride for the induction of anesthesia in pediatric cases because of the possibility of ventricular fibrillation. With proper premedication I have found it unnecessary.

I do not feel that spinal anesthesia should be used unless the patient is 14 years of age or of comparable physical development. It has been, and can be, used with apparent safety, but it is preferable to withhold it until the spinal anatomy has become essentially adult.

From the age standpoint alone there is little choice between spinal and inhalation anesthesia for patients between the ages of 14 and 60 undergoing an orthopedic operation on the lower extremities. The absolutely essential factors are adequacy of airway, oxygen supply to the tissues and replacement therapy. In cases in which the patient is to be on his abdomen I prefer spinal anesthesia, either single dose or continuous, depending on the duration and extent of the procedure to be accomplished. The reason for this is that respi-

Read before the joint meeting of the Section on Orthopedic Surgery and the Section on Anesthesiology at the Ninety-Fifth Annual Session of the American Medical Association, San Francisco, July 5, 1946.

ration is least interfered with when low spinal anesthesia is used and relaxation of the large muscle masses is maximum. If spinal anesthesia is not practical or desirable and the patient is on his abdomen, as for a spinal fusion, an endotracheal type of anesthesia is done. I have also used endotracheal anesthesia for the hemipelviotomy for which I was called on to give an anesthetic. The reasons for using the endotracheal type are to insure an adequate airway at all times and to be able to resuscitate the patient if this should prove necessary.

In upper extremity work the nature of the case should determine the type of anesthesia. Such types of regional anesthesia as brachial blocks and triple nerve blocks find their greatest usefulness here. For surgery about the shoulder girdle I use inhalation anesthesia, usually endotracheal, because it leaves more room for the surgical team and also for the reason previously mentioned.

I do not use pentothal sodium as an anesthetic. It gives amnesia and is a powerful hypnotic. I use it as an hypnotic and secure relief of pain with nitrous oxide and oxygen with never less than 20 per cent oxygen. I also use pentothal sodium in inducing ether anesthesia to avoid the disagreeable and occasionally difficult and dangerous second stage of anesthesia. It is true that pentothal sodium can be used alone for many orthopedic procedures, but in my opinion this is neither safe nor desirable, because the drug must be given in amounts that profoundly depress respiration in order to produce sufficient narcosis to suppress reflex responses to pain.

The choice of inhalation agent is largely determined by local custom, the desires of the surgeon and anesthetist and the degree of relaxation required. In the age group under discussion (14 to 60), barring metabolic complications and explosion hazards, there is little to choose between the various agents if oxygen supply to the tissue, airway and replacement therapy are adequate.

Intocostrin (curare) may be used with light inhalation anesthesia, such as nitrous oxide–oxygen, to give adequate relaxation and safety from explosion. I have used the combination extensively and have found it both safe and satisfactory to surgeon and patient. The combination has been found of great value in operations on the bones of the face, as patients do not vomit when emerging from the anesthesia. For operations involving the administration of intocostrin an endotracheal tube is always used.

In the aged, the problems for the surgeon and anesthetist multiply because of the general metabolic depression of such patients. Because of the milder effects on the patient's metabolism, a combination of local or regional anesthesia and a light inhalation anesthesia for amnesia and additional relief of pain finds its greatest use in the aged. The muscle masses are diminished and relaxation is not such a severe problem. Absolutely minimal spinal anesthesia may be used on selected patients. Because of the low vital reserves, replacement and oxygen therapy are of the utmost importance, and if they are kept in mind the possibility of tragedy is minimized. With proper premedication and careful handling extensive hip operations may be done with a minimum of complications incident to anesthesia and surgery under surprisingly light anesthesia. However, regional and/or local anesthesia are to be preferred over any inhalation method if they can be used.

The most serious metabolic problem met in anesthesia for orthopedic surgery is that of diabetes. Because of insulin therapy and proper diet and care, more and more diabetic patients are requiring surgical intervention not only in the younger but in the older age groups. For amputations in these diabetic patients there is no substitute for refrigeration anesthesia, properly given. Because ether produces acidosis, its use is to be avoided in these patients. When cyclopropane can be used, it is probably the inhalation anesthetic of choice, although nitrous oxide–oxygen plus curare may be preferred in certain cases, namely, those of patients with cardiac complications. Regional, local and spinal anesthesia should be considered in cases complicated by diabetes even though their use might not be ideal in the light of other considerations.

Too much stress cannot be placed on supportive therapy before, during and after surgical intervention. Whole blood has no equal in treating hemorrhage. Plasma finds its use in cases complicated by crushing and trauma when whole blood has not been lost before or during surgery and in cases in which there is hemorrhage when whole blood cannot be secured. Oxygen administration even when inhalation anesthesia is not used is frequently of the utmost value, since it conserves the energy of the patient. The alleviation of fear and apprehension by wise and adequate sedation goes a long way to reduce the incidence of operative and postoperative shock. Replacement of water and electrolytes by the administration of isotonic solution of sodium chloride, and the provision of adequate nourishment by the giving of dextrose and aminoacids make for a smoother convalescence. It is not possible to be specific as to dosages and amounts in a paper of this type; there can be no substitute for good clinical judgment.

It is vital if medical science as related to surgery is to progress, that there develops an appreciation of the great importance of anesthesia in the overall picture. The day of "pouring ether" or of giving a "whiff of gas" or a "shot of spinal" is ending. The medical anesthetist is becoming more and more prominent because of the gradual realization that he can do much, if allowed, to make the task of the surgeon easier and the course of the patient undergoing surgical intervention smoother and safer.

Department of Anesthesia, Los Angeles County Hospital.

ABSTRACT OF DISCUSSION

Dr. C. J. Betlach, Santa Barbara, Calif.: The choice of anesthetic is not as important as the manner in which the anesthetic is administered. With the wide variety of anesthetics and methods now available, it is important that the anesthetic chosen be one with which the anesthetist is familiar if he or she is not fully trained. I disagree with Dr. Dillon with regard to pentothal sodium. I use pentothal alone a great many times, especially for the shorter procedures of five to fifteen minutes, and find it very satisfactory. It is sometimes difficult to get the pentothal started and get nitrous oxide or oxygen started, or cyclopropane started before the orthopedic surgeon has completed his procedure. There are many combinations of anesthetics that can be used in orthopedic surgery, and the one that I prefer and like to use a great deal is a combination of pentothal and nitrous oxide, or regional anesthesia and pentothal. In debilitated persons requiring amputa-

tion of the lower extremity, one can produce sufficient spinal anesthesia with as little as 35 mg. of procaine. The patient will still retain movement of his extremity, but he will have enough analgesia to carry out the procedure. I should like to emphasize that the anesthetist must anticipate shock and be prepared to keep the patient in good condition by the administration of fluids and whole blood.

DR. DOROTHY A. WOOD, San Mateo, Calif.: The armamentarium at the command of the anesthetist is as varied as the surgical picture demands, and it is therefore up to the anesthetist to adjust the anesthesia to the problem at hand. The practice of giving small doses of a combination of agents is an excellent one, particularly in combination with nitrous oxide and oxygen and with the maintenance of a high percentage of oxygen. I wish to concur with Dr. Dillon in stating my disapproval of the use of sodium pentothal as an anesthetic, for the drug must be given in amounts that profoundly depress respiration in order to produce sufficient narcosis to suppress reflex responses to pain. Dr. Dillon did not mention solution of tribromoethanol. During the last four years the orthopedic work with which I have been associated has largely been necessitated by accidents and casualties either industrial or traffic in origin. Patients have frequently arrived in the emergency room with multiple fractures involving two or more extremities, and 1 had both arms and both legs broken. In addition, there may be multiple lacerations which require suture. Roentgenograms are necessary and the facilities of the operating room are needed, so that transportation of the patient through the corridors becomes a problem. I have found that an 85 mg. per kilogram of body weight dose of solution of tribromoethanol facilitates all this, and that lacerations can be cleansed and closed, airway inserted and oxygen and nitrous oxide given at the time the more painful procedures are instituted. Frequently the patients have lacerations on the back which require that the patient be placed on his abdomen for part of the repair, and under anesthesia with solution of tribromoethanol this change in position can readily be accomplished. In fracture of the hip in which it is the surgical procedure to insert a pin, there are always delays and intervals in which no pain is inflicted while x-rays are being taken and developed and returned to the operating room with the report of the position, and we have found that anesthesia with this drug is satisfactory, with the addition of nitrous oxide and oxygen when the painful procedures occur. Again local custom comes to bear on this subject. Others with a limited experience with the drug may not be as favorably impressed, but I speak from the experience of fifteen years of almost daily usage for one reason or another. I should also like to say that I was the first one to administer vinethene to a human being, and I have not used it many times since.

DR. F. E. CLOUGH, San Bernardino, Calif.: I am neither an anesthetist nor an orthopedic surgeon, although I am an orthopedist by adoption since they began treating acute fractures. That is just a recent thing, because thirty or forty years ago an orthopedist never saw an acute fracture.

I live in a city of 60,000 people. All of the good anesthetists during the past five years have been in the war. The only fellows available to give anesthetics have been my age.

Over a period of forty-odd years I have had considerable experience in traumatic surgery, and through the last few years I have encountered a Colles' fracture or a greenstick fracture every few days. I was amazed on coming to San Bernardino many years ago to find that anesthesia was induced by ethyl chloride in a very large percentage of the cases, and much to my interest it is still being done. I have yet to see the first bad effects from that type of induction. Physicians here go ahead by themselves and do not hesitate to give enough ethyl chloride that the patient does not know what is being done when the fracture is set. One does not always have to wash out the stomach of a patient because he had some food within six hours. It is a great deal easier to let the patient put it in a pan, and I don't think anybody strangles from it. There is no need to get a trained anesthetist out of bed to do a lot of these things. There is too much tendency in the big hospitals today to feel it necessary to have from three to seven assistants and from two to five scrub nurses, when two persons helping could do the same amount of work.

DR. ALLEN CONROY, Chicago: I have heard nothing said about three problems that are peculiar to orthopedic surgery. One is the difficulty encountered with operative procedures around the neck, in which a cast or some other fixation apparatus is used to stabilize the head and neck and shoulders as one unit. For some time endotracheal anesthesia was used for that particular job, which ended with the patient almost completely enclosed down to the nipples with the tube sticking out through the cast at the mouth. A couple of near disasters occurred when the tube was removed. The fact that the position of the air passages had been changed during overcorrection was overlooked. As long as the tube was in, the procedure was safe; when it was withdrawn, the whole cast had to be taken off. So there might be something to be said for rather preliminary casting and testing of the position, or even allowing the patient to recover sufficiently till his throat reflexes have returned before making a final connection between the head cast and the shoulder portion. Second, the patient who is still profoundly anesthetized is in no position to correct for the circulatory changes that occur when he is set erect for some types of fixation. His muscle tone is gone, and probably some of the circulatory centers are inactive. He cannot compensate quickly enough, the blood pressure drops, and he goes into what resembles profound shock. I have found it satisfactory to pull the patient and the mattress beyond the upper end of the table and let the patient's head and neck and the center of the shoulders rest on the anesthetist's knee. Finally, many surgeons when performing a lumbar fusion or laminectomy expect the patient to be jack-knifed over a very high rise in the table. That is fine from the surgical point of view and I do everything I can to help the surgeon get that back straightened out so he can find a place to work. But I would beg of you to do something to allow some excursion of the diaphragm. One way to achieve that is with a roll under the hips and a horseshoe pillow that comes up the side of the body and underneath the shoulders. I have generally found that one has to make a compromise in the very fat patient. I think most anesthetists would appreciate some surgical compromise on the jack-knife position.

CAPTAIN JOHN DILLON, Los Angeles: I do not have a great deal to say regarding these momentary anesthetics. I had two Colles' fractures set without any anesthetic, and it did not do me any particular harm; so one can even go back to no anesthetic at all. The point is not what can be done with primitive methods but what is best and what can add to progress in medical science to the benefit of the patient. I am willing to agree that it would be less expensive if an anesthetist were not called out of bed in the middle of the night to give an anesthetic of thirty seconds for reduction of a greenstick fracture, but the problems under discussion, on the whole, have been of more major surgical importance. Ethyl chloride has been used and can be used. I have no particular objection against its use by anyone, although personally I do not like it. In regard to Major Conroy's difficulties, I have had the same difficulties, and they are very severe. The use of multiple spicas which sometimes involve both shoulders or both hips—in these combined orthopedic and surgical cases—is really very, very serious. One solution (and this is not the only solution), which proved satisfactory was the use of pentothal induction for a nitrous oxide endotracheal anesthesia, using curare as a preliminary relaxant. These patients will go along six and seven hours with nitrous oxide-oxygen anesthesia and a little codeine if they tend to get restless, or a little Demerol given intravenously, and at the end of the surgical operation they are flushed out with oxygen once or twice, the tube is removed and the patients will begin to talk and in less than an hour they want to eat. The multiple casts or heavy spicas, particularly on the shoulder girdle and round the hip when the patient has to be manipulated many ways, offer one type of solution.

INFECTIOUS GRANULOMATOUS LESIONS OF THE CERVIX

WILLIAM F. GUERRIERO, M.D.
R. JENNETT, M.D.
and
W. B. MANTOOTH, M.D.
Dallas, Texas

The group of infectious granulomas of the cervix include lesions resulting from tuberculosis, granuloma inguinale, syphilis and chancroid.

Their importance depends on their morphologic resemblance to carcinoma as seen at speculum examination, while in general the symptoms of the granulomatous cervical lesions are basically those of carcinoma. Minor deviations of this will be pointed out in the discussion of each type of lesion. The clinical course, therapy, psychologic effect on the patient and the prognosis, on the other hand, are vastly different from those in carcinoma.

In the two year period from March 1, 1944 to March 1, 1946 there were 123 patients admitted to the obstetric and gynecologic service of Parkland Hospital for biopsy of the cervix. Microscopic examination of the tissues revealed: carcinoma in 24, or 19.4 per cent; cervicitis in 79, or 64 per cent; cervical polyp in 3, or 2.5 per cent; adenoacanthoma in 3, or 2.5 per cent; cervical fibroid in 3, or 2.5 per cent; leukoplakia in 2, or 1.6 per cent; squamous metaplasia in 2, or 1.6 per cent; granuloma inguinale in 3, or 2.5 per cent; tuberculosis in 2, or 1.6 per cent; tertiary syphilis in 1, or 0.8 per cent, and chancroid in 1, or 0.8 per cent. In addition 26 cases of primary and secondary syphilis and 1 case of chancroid were found in the Dallas Venereal Disease Clinic of Parkland Hospital during the last ten months of this study.[1]

TUBERCULOSIS

In 1851 Giel [1a] wrote a clinical description of tuberculosis of the cervix, to which little new has been added. In 1892 J. W. Williams [2] wrote an extensive review for the first time in America and collected 68 cases of the disease from the literature. Many other significant papers followed, but the best modern review was contributed by Collins [3] in 1938, who reported 6 cases from his practice and added 185 from the literature.

Incidences as reported vary considerably, but it is believed that with correct diagnosis the incidence would be significantly increased. Counsellor and Collins [4] recorded an age incidence of 20 to 40 in 73 per cent of their cases and stated that marriage and pregnancy are contributing factors in the disease. Our cases were in a 23 year old Negro nullipara and a 43 year old white octipara.

Tuberculosis of the cervix is primary if other foci are absent. The origin of primary cervical infections is by introduction from the outside. In our first case infection was evidently primary, since no other focus of infection was found despite nearly two years of observation.

In our second patient the lesion was secondary to foci in the lungs and upper part of the genital tract. In approximately 85 per cent of cases tuberculosis of the cervix is secondary in the fallopian tubes, lungs, genitourinary and gastrointestinal tracts, in the order given.

Four different types of lesions, depending on the resistance of the host, the virulence of the infection and the amount of tissue reaction, may be present: ulcerative, miliary, papillary and bacillary catarrhal. The ulcerative type is most commonly seen and appears as a large area of deep ulceration with ragged undermined edges and a red, soft, easily bleeding, granulomatous base. Microscopically, the fungoid vegetation is covered with any of the various epithelial types and the stroma is infiltrated with tubercular elements.

The miliary type exhibits external cervical tubercles, microscopically typical, with or without caseation. In the bacillary catarrhal type the cervix appears grossly normal but often is large and edematous because the infection is deep in its substance. Microscopically, tuberculous nodules in various stages of evolution are seen. The ulcerative and papillary lesions are not grossly distinguishable from carcinoma and, like it, may extend to the vagina, parametrium, uterus and adnexa. The bleeding may be spotty or profuse because of the ulcerative nature of the lesion. Our first patient evidenced postcoital spotting, but bleeding was sufficiently profuse in the second patient to require the replacement of blood. Leukorrhea is also a prominent symptom and is grayish yellow, thick, profuse and foul because of the destruction of tissue and the presence of caseous material. Often it is the only symptom and may be overlooked both by patient and physician. In our cases neither patient gave a history of leukorrhea although each admitted its presence for an indefinite period on specific questioning. Loss of weight, night sweats, anemia and weakness may be present, but generally these are due to the presence of tuberculosis elsewhere in the body. Pelvic pain is present with secondary infection or with tuberculous extension to the vagina, parametrium and upper part of the genital tract.

Clinically the diagnosis is seldom made, although one must be suspicious of all granulomatous lesions of the cervix in patients with tuberculosis elsewhere. In neither of our patients was the lesion correctly diagnosed preoperatively, since the usual diagnosis of carcinoma was made. Only after the pathologist failed to confirm the diagnosis of carcinoma was the true nature of the condition suspected. The finding of Mycobacterium tuberculosis in the vagina or in the injected guinea pig is, of course, definite.

The treatment may be curative or palliative, depending on parity, age, localization to the cervix, extension or degree of distant focus. The operation may consist of cervical amputation or total hysterectomy. Our first patient was a young nullipara with the lesion localized to the cervix and without evidence of tuberculous foci elsewhere; a low cervical amputation was performed. Later she received a subcastration dose of

From the Departments of Obstetrics and Gynecology of Parkland Hospital and the Southwestern Medical College.

Read before the Section on Obstetrics and Gynecology at the Ninety-Fifth Annual Session of the American Medical Association, San Francisco, July 4, 1946.

1. Under the direction of A. Scboch, M.D., and L. J. Alexander, M.D.

1a. Giel, cited by Williams.[2]

2. Williams, J. W.: Tuberculosis of Female Generative Organs, Johns Hopkins Hospital Rep. **3**: 85-152, 1892.

3. Collins, D. C.: Management of Tuberculosis of Cervix: Report Based on One Hundred and Ninety-One Cases, Six Cases Being Reported for First Time, J. A. M. A. **112**: 605-610 (Feb. 18) 1939.

4. Counsellor, V. S., and Collins, D. C.: Tuberculosis of Cervix Uteri, Am. J. Obst. & Gynec. **30**: 830-840 (Dec.) 1935.

roentgen radiation. After two years there was no evident recurrence, she was in good physical condition and her menses had returned six months after radiation. The second patient with extensive involvement was treated palliatively.

GRANULOMA INGUINALE

The cervix is now recognized as a primary or secondary site of granuloma inguinale. Because of the presence of lesions other than in the inguinal region, Pund [5] suggested that the entity be called "granuloma venereum." Since this is often confused with "lymphogranuloma venereum," we offer the term "granuloma venereum cervicitis."

Gardner [6] in 1928 suggested that some of the exuberant nonmalignant granulomatous lesions of the cervix might be granuloma inguinale. In 1934 McGee [7] reported 8 such lesions from Charity Hospital of Louisiana but was unable with the staining methods then at his disposal to demonstrate Donovan bodies in the tissues. Nevertheless the histopathology and the favorable response to antimony and potassium tartrate were identical to those of true granuloma inguinale. Later Arnell and Potekin [8] (1939) were able to demonstrate Donovan bodies in preserved tissues from 4 of McGee's patients by the use of silver stains. Pund and Greenblatt [9] in 1937 established granuloma inguinale as a distinct clinical entity by utilizing the fact that Donovan bodies have a special affinity for silver. Arnell and Potekin [8] in 1939 reported 38 cases and collected reports of 12 others between 1937 and 1939. In 1938 Pund and Gotcher [10] and Pund [11] in 1944 demonstrated that the disease can involve the uterine corpus, parametrium and adnexa and can produce death.

Like tuberculosis, granuloma venereum cervicitis undoubtedly will be found, with correct diagnosis, to be a relatively common lesion particularly in the Negro.

The specific etiologic agent is a micro-organism, the Donovan body, probably a protozoan, which to our knowledge has never been cultured and is pathogenic only for man.

On examination the early lesion appears as a shallow ulcerated area with well defined edges and a diffuse, red, granulomatous base. The advanced lesion consists of a large cauliflower excrescence of soft, red, friable tissue displacing part or all of the cervix. Not infrequently there may be extension to the adjacent vaginal walls or uterus, adnexa, inguinal regions and bones. Both types bleed easily and resemble carcinoma except for the softness of the lesions. However, it must be remembered that granulomatous lesions which contain large amounts of fibrous tissue may feel hard like carcinoma. All 3 of our cases were of the advanced type. In 2 patients the lesion was confined to the cervix, but in the other it extended to the vagina, uterus, adnexa and bones. This patient died of the disease.

Microscopic examination of the lesion reveals an abundance of loose connective tissue with many young blood vessels. The exuberant granulation tissue is interspersed with large numbers of plasma cells, and there is a diffuse infiltration of polymorphonuclear leukocytes. The essential microscopic feature is the presence of large monocytes with many intracytoplasmic spaces in which Donovan bodies are dispersed. These bodies are elliptic or round, stain deeply and are usually arranged peripherally in the intracytoplasmic spaces.

The symptoms do not vary from those of carcinoma, but the youth of the patient is suggestive of a nonmalignant lesion. Two of our 3 patients were parous; the other was not. All were young Negresses aged 21, 22 and 28 years. This youthful incidence agrees with that in other published reports.

The 21 year old pregnant patient was admitted at term for painless bleeding of moderate amount. The 22 year old patient was readmitted three weeks after delivery because of excessive bleeding. The 28 year old nonpregnant patient was admitted to the gynecologic service because of profuse vaginal bleeding. Pain was present in 2 patients but was due either to extension of the disease or to secondary infection, a frequent complication. Arnell and Potekin [8] reported pain in 70 per cent of their patients. Secondary anemia is nearly always present, the hemoglobin level being 60, 55 and 40 per cent in our 3 cases.

The final diagnosis depends on a demonstration of the Donovan body in smears, scrapings or a biopsy specimen. Better results are obtained by the use of biopsy. Diagnosis is by no means a simple matter in chronic cases, as the characteristic monocytes may be scarce. Extensive search of material from repeated biopsies and the use of special stains is frequently necessary, as shown in the study of the nonpregnant patient of this series. After four separate biopsies failed to reveal carcinoma Donovan bodies were found by diligent search of Giemsa-stained sections. The biopsy should always include the base of the lesion as well as normal cervical tissue. If hematoxylin and eosin stains show the tissular reaction of granuloma venereum cervicitis without the demonstration of the Donovan bodies, Dieterle's silver stain or Giemsa stain should be used. Recently Kornblith [12] has advocated a skin test as an aid in diagnosis, but his work as yet lacks confirmation.

Therapy is general, local and specific. General measures include adequate diet, vitamins, penicillin and sulfonamide compounds given parenterally. Local therapy in the form of sulfonamide jellies or sulfonamide powder is frequently of benefit. Specific therapy by the administration of one of the antimony compounds over a period of six months as stibophen (Fuadin) 5 cc. twice weekly, antimony and potassium tartrate 1 per

5. Pund, E. R.; Huie, G. B., and Gotcher, V. A.: Granuloma Inguinale of Cervix Uteri: Statistical Study, Am. J. Obst. & Gynec. **37:** 447-479 (March) 1939.

6. Gardner, G. H., in Kelly, H. A.: Gynecology, New York, D. Appleton and Company, 1928.

7. McGee, W. B.: Granuloma of Cervix, Am. J. Obst. & Gynec. **28:** 244-250 (Aug.) 1934.

8. Arnell, R. E., and Potekin, J. S.: Granuloma Inguinale (Granuloma Venereum): Analysis of Thirty-Eight Cases, Am. J. Obst. & Gynec. **39:** 626-635 (April) 1940.

9. Pund, E. R., and Greenblatt, R. B.: Specific Histopathology of Granuloma Inguinale, Arch. Path. **23:** 224-229 (Feb.) 1937.

10. Pund, E. R., and Gotcher, V. A.: Granuloma Venereum (Granuloma Inguinale) of Uterus, Tubes and Ovaries, Surgery **3:** 34-40 (Jan.) 1938.

11. Pund, E. R., and McInnes, G. T.: Granuloma Venereum: A Cause of Death; Report of Six Fatal Cases, Clinics **3:** 221-234 (June) 1944.

12. Kornblith, B. A.: An Intradermal Reaction as an Aid in Diagnosis of Granuloma Inguinale, New York State J. Med. **44:** 2476-2478 (Nov. 15) 1944.

cent, 10 cc. twice weekly, or Anthiomaline (antimony and lithium thiomalate) 3 cc. three times weekly. Our 3 patients were treated with stibophen with a good response in 2 of the cases. The third patient with dissemination of the infection to other areas of the body died from the disease.

The disease as it affects the pregnant patient deserves special mention. The therapeutic response is poor, infection is common and large growths may cause dystocia, hemorrhage and cervical and uterine tears. In some cases delivery by elective cesarean section with or without hysterectomy may be indicated. Our term pregnant patient was delivered of a live infant by low cervical section after four hours of labor. The postoperative course was uneventful, although a morbidity of three days occurred with the highest temperature being 101 F. On the other hand, vaginal birth is not impossible, since the disease of our second patient was not diagnosed until three weeks post partum. Obviously the disease was present and unrecognized during pregnancy.

SYPHILIS

Nearly a century ago syphilitic manifestations of the cervix were first noted by Ricord,[13] and until recently these lesions have been regarded as uncommon. In a large and carefully examined series of patients Davies[14] reported an incidence of 44 per cent. Sharp, Alexander and Schoch[15] in 1943 reported 10 primary and secondary syphilitic cervical lesions from the Dallas Venereal Disease Clinic of Parkland Hospital and stated that in many instances the initial infection in the female was on the cervix. Cervical syphilis may be primary, secondary or tertiary. The primary stage is represented by the chancre. The secondary stage appears either as an erosion, macule, papule or ulcer. The tertiary lesion is an ulcerative or proliferative gumma and is the type most commonly confused with carcinoma. Our 26 primary (10 chancre) and secondary (6 erosions, 5 macules and 3 ulcerations) syphilitic lesions were found by the performance of routine dark field examination on all women with infectious syphilis or exposed to infectious syphilis.[15a] In the biopsies made in this study only 1 tertiary syphilitic lesion of the cervix was found.

While the primary lesion on the outer genitals presents and retains its characteristic and pathognomonic aspect, the chancre of the cervix undergoes a rapid and variegated evolution. In the stage of greatest development it appears as a deep, funnel-shaped sore with thickened, rounded edges which slope down to a smooth floor of glistening brown. A grayish or white pseudomembrane composed of necrotic tissue and therefore firmly attached covers the base of the ulceration. A thin red or reddish brown line encircles its periphery.

The macules are a grayish white due to a thickening of the overlying epithelium, which may also lead to a slight elevation of the affected area. Large macules or confluences of smaller ones are termed mucous patches. The erosion is pinkish or brownish, but more often it is covered with a grayish exudate which, though small in amount, abounds in spirochetes.

Secondary ulcers appear in various forms and morphologically resemble early carcinoma in many instances. Some are red, varied in size and devoid of characteristic features. There is present an associated profuse, yellow, mucopurulent discharge with a considerable amount of detritus and a sickly odor which is different from the stench of cancers.

The tertiary form is that of a gumma, which in the majority of instances undergoes ulceration and necrosis; or, as in our patient, a predomination of tissue proliferation occurs so that a fungating, soft mass replaces most or all of the cervix.

On microscopic examination many new capillaries are found, about which there are dense infiltrations of lymphocytes and plasma cells. Giant cells are present in varying numbers. The endothelium of the capillaries is swollen or proliferated, so that the lumen is narrowed or even obstructed. The histologic picture, therefore, is that of any chronic inflammation and is in itself by no means pathognomonic unless one succeeds in demonstrating Spirochaeta pallida in the tissues.

Generally it is thought that primary and secondary lesions of the cervix produce few if any symptoms. However, Gellhorn[16] and Morrison[17] noted a loss of appetite, fever, articular pains, malaise, abnormal vaginal bleeding and serosanguineous leukorrhea. The patient with tertiary syphilis, on the other hand, complained of bleeding of four months' duration as her only symptom. We noted in this series that the preceding symptoms were frequently present and responded immediately to antisyphilitic therapy.

Syphilitic lesions are important, since many are clinically mistaken for erosions and carcinoma of the cervix. It must not be forgotten, as Warthin[18] has insisted, that carcinoma and syphilis of the cervix coexist frequently. By the same token other granulomatous lesions of the cervix have been observed concomitantly with syphilis of the cervix.

The diagnosis of primary and secondary lesions depends on the finding of S. pallida by dark field examination, since serologic tests are not always positive until three weeks after the initial infection. The tertiary lesion is diagnosed by biopsy and positive serologic tests.

Recognized antisyphilitic therapy is advocated for all syphilitic lesions of the cervix.

CHANCROID

Chancroid of the external female genitalia is common, but this type of cervical infection is rare. We were able during the last six months of this study to establish the presence of this entity in 2 white women. A search of the literature reveals only Day's[19] report of 2 cases. Like the other granulomatous lesions of the cervix, the rarity of this entity is probably due

13. Ricord, P., cited by Pusey, W. A.: History and Epidemiology of Syphilis, Springfield, Ill., Charles C Thomas, Publisher, 1933.
14. Davies, T. A.: Primary Syphilis in the Female, London, Oxford University Press, 1931.
15. Sharp, J. W.; Alexander, L. J., and Schoch, A. G.: Dark-Field Examination of Lesions of the Cervix Uteri in Diagnosing Early Syphilis, Urol. & Cutan. Rev. **47**: 171-173 (March) 1943.
15a. From the Dallas Venereal Disease Clinic of Parkland Hospital.
16. Gellhorn, G.: Syphilis of Cervix, J. A. M. A. **87**: 1812 (Nov. 27) 1926.
17. Morrison, M. T.: Chancre of the Cervix, Am. J. Syph. & Neurol. **18**: 196-203 (April) 1934.
18. Warthin, A. S., and Nolan, L.: Differential Diagnosis of Chancre and Carcinoma of the Cervix, Am. J. Syph., Gonor. & Ven. Dis. **5**: 553-562, 1921.
19. Day, L.: Chancroid of the Cervix: Report of Two Cases, Proc. Staff Meet., Mayo Clin. **20**: 70-71 (March 7) 1945.

more to a lack of examination and diagnosis than to an actuality. Chancroid, or ulcus molle cutis, is a highly infectious, localized lesion caused by inoculation with Hemophilus ducreyi, a gram-negative bacillus appearing singly or in short chains. The so-called histologic changes of chancroid are generally believed to be nonspecific. However, Heyman, Beeson and Sheldon [20] have contended that there is a specific histologic pattern. In their opinion the lesion consists of three zones. The surface zone, or base of the ulcer, is shallow and made up of polymorphonuclear leukocytes, fibrin, red blood cells and necrotic tissue. Below this is a fairly wide zone of edematous tissue with endothelial cells in various stages of proliferation outnumbering all other cellular components. Numerous newly formed blood vessels may show palisading with occasional degeneration of the vessel walls and thrombosis. Finally there is a deep zone with a dense infiltration by plasma cells and lymphocytes.

Symptoms include soreness in the lower part of the abdomen, a foul, grayish vaginal discharge and burning and pain in the vagina. On examination there may or may not be ulcers of the external genitalia and inguinal lymphadenopathy. Pronounced vaginal tenderness is present to such an extent that the patient will not permit adequate bimanual examination. The cervix appears to be red and edematous with one or more round, firm, punched-out, ulcerated lesions on the portio. The ulceration may be covered with an easily removable whitish exudate. In some instances similar lesions are present in the vaginal vault.

Diagnosis is made by smear, culture, Ito-Reenstierna skin test and biopsy. In a series of 175 cases Kornblith [21] and his co-workers reported that smear was the best single criterion of diagnosis, with specific identification possible in 88 per cent of cases. In advanced cases, especially in women, on the other hand, smears are frequently crowded with many bacteria and diagnosis is often impossible; the United States Army does not recommend them.[22]

Heyman, Beesen and Sheldon [20] obtained positive cultures in 40 per cent of their cases using defibrinated rabbits' blood as a medium. Skin tests alone are of limited diagnostic value.

The efficacy of biopsy in the diagnosis has recently been stressed in advanced lesions.[20] In our 2 cases positive diagnosis was made by the finding of H. ducreyi and by positive skin tests. Confirmation of the diagnosis was obtained by biopsy in 1 case.

Treatment consists of the administration of sulfathiazole parenterally and locally for seven to ten days.

CONCLUSIONS

1. Infectious granulomatous lesions of the cervix are more commonly present than has previously been suspected.

2. The improvement of diagnostic facilities has made specific diagnosis of these lesions possible.

3. When a clinical diagnosis of carcinoma of the cervix is not substantiated by microscopic examination, one of the granulomatous lesions should be suspected.

4. The importance of specific diagnosis rests in the fact that the clinical course, therapy, psychologic effect on the patient and prognosis are vastly different from those for carcinoma.

20. Heyman, A.; Beeson, P. B., and Sheldon, W. H.: Diagnosis of Chancroid: Relative Efficiency of Biopsies, Cultures, Smears, Autoinoculations and Skin Tests, J. A. M. A. **120**: 935-938 (Dec. 1) 1945.

21. Kornblith, B. A.; Jacoby, A., and Chargin, L.: Chancroid: Treatment with Sulfathiazole and Sulfadiazine, J. A. M. A. **117**: 2150-2153 (Dec. 20) 1941.

22. Diagnosis and Treatment of Venereal Diseases, Circular Letter 74, Office of Surgeon General, Washington, D. C., Government Printing Office, July 25, 1942.

ABSTRACT OF DISCUSSION

DR. WILLIAM B. MCGEE, San Diego, Calif.: Two women came into the hospital for biopsy of the cervix, with the impression of carcinoma. The attending physicians were so sure that these women had carcinoma that they inserted radium at the time of the biopsy. By the time the biopsy came back as a granulation tissue the patients had already received radium in a fairly large amount. It was learned from these 2 cases that the use of radium is contraindicated in the noninfectious granulomas, because both patients became progressively worse. The problem that I and my associates had in the differential diagnosis of our 8 cases (a series including the 2 just mentioned) was between granuloma and tuberculosis, which are easily differentiated. In tuberculosis instead of a decided infiltration of polymorphonuclear leukocytes there is a pronounced infiltration of lymphocytes, tubercles, giant cells and caseous material. Tuberculosis of the cervix is almost always secondary to tuberculosis in the body elsewhere, and the cervical infection is usually secondary to that in the fallopian tubes. If tuberculosis can be ruled out in the chest, the gastrointestinal tract and the genitourinary tract, and there is a positive diagnosis of tuberculosis of the cervix, then the patient should have an exploratory laparotomy; if tuberculosis is found in the pelvis, then she should have a radical surgical operation. Another differential diagnosis which Dr. Guerriero did not mention is a decidual reaction which is occasionally seen on the cervix in pregnant women. Here, the diagnosis is made by microscopic section and the condition requires no treatment, as it is a self-limiting disease and disappears at the end of the pregnancy. The question of syphilis as a differential diagnosis from granulomatous lesions of the cervix is a difficult one. The early syphilitic lesions appear grossly as an extremely early cancer, and the later tertiary lesions of the cervix, the gummatous lesions, look decidedly similar to carcinoma. Here again microscopic study provides a definite diagnosis, revealing giant cells, lymphocytes and decided changes in the blood vessel walls. The lesions respond, as Dr. Guerriero told you, to the antisyphilitic treatment. Most of the reports on granulomas have come from the South. Physicians will definitely see more of these lesions in other parts of the country. With mass migration of war workers and military personnel to all parts of the country, these granulomatous lesions will be seen in other parts of the country, although I question if the Donovan body will live in this wonderful California climate.

DR. WILLIAM F. GUERRIERO, Dallas, Texas: I want to thank Dr. McGee for his able discussion, because as an intern under him in 1934 and 1935 some of my stimulation for this work was aroused. Dr. Williams' paper interested me very much because I was afraid, in presenting such a subject, that it might not be of general interest to the Section. However, with the mass migration of the Negro from the South to the North and to the West, as Governor Jones of Louisiana has shown, it may be necessary for all the practitioners of medicine to become familiar with these diseases. These lesions are not uncommon, as was shown by the high incidence in this series. One must be ever conscious of these lesions because in medical practice today, particularly in obstetrics and gynecology, one usually thinks only in terms of the common lesions of the cervix or carcinoma. By making the proper diagnosis these lesions can be treated adequately to offer the patient a good prognosis. In most instances, one must rely on the pathologist, as the clinical signs and symptoms definitely resemble carcinoma and other cervical lesions.

Special Article

HISTORY OF THE AMERICAN MEDICAL ASSOCIATION

MORRIS FISHBEIN, M.D.
Editor, Journal of the American Medical Association and Hygeia, the Health Magazine
Chicago

(Continued from page 771)

(NOTE.—*Following is the twentieth chapter of a history of the American Medical Association in process of development for publication in connection with the celebration of the Centennial of the American Medical Association in Atlantic City in June 1947.*

The general account of the history of the Association will be followed by individual histories of the various councils, bureaus, publications and other activities of the Association. The general account is written by the editor of THE JOURNAL. *Each of the other historical contributions will be by a member of the individual council, bureau or agency responsible and now associated with it or directly related to its work. Included will be photographs, signatures and a brief biography of each of the hundred presidents of the American Medical Association. This feature has been prepared by Dr. Walter L. Bierring.*

It will be impossible to publish all of the material in THE JOURNAL. *The complete work will be published in book form. It is hoped to have it available by the time of the annual session.*—ED.)

CHAPTER 20. *The War*

1915-1919

1915

SAN FRANCISCO

Late in 1914, as one of its many exposés of "patent" medicines, THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION published a report on a product manufactured by the Chattanooga Medicine Company of Tennessee called "Wine of Cardui." The article had been prepared as a joint effort of the laboratory of the Association, the Council on Pharmacy and Chemistry, the Division of Propaganda for Reform and the editorial department. The facts stated were so challenging that the owners of the Chattanooga Medicine Company (the Patton family, one of whom was a leader in the Methodist Church South) sued for libel. The record of the suit is told in another chapter. The company also sued Dr. Oscar Dowling, who was secretary of the state board of health in Louisiana. The Board of Trustees determined to make a complete defense in the case and the attorneys for the American Medical Association—Loesch, Scofield and Loesch—were instructed to take charge. Because the proprietors of secret nostrums were now attacking the citadel of American medicine, the Board of Trustees appointed a committee to prepare a special report to the medical profession for presentation to the House of Delegates.

PHYSICIANS AND PUBLIC HEALTH

In opening the annual session for 1915, Dr. Victor C. Vaughan emphasized particularly the need for improvement of postgraduate medical education. He felt that the medical profession might be losing its prestige in relationship to the great advances that were being made in preventive medicine. In Michigan, for instance, the campaign against tuberculosis was being led by a group of whom three were not physicians.

The Board of Trustees indicated that the rapid extension of the interests of the Association had so affected its financial status that profits were reaching the vanishing point. The entire profit for the year was less than $4,000. While its work was altruistic, the Board warned the Association that the expenses must not increase but should decrease.

HOUSE OF DELEGATES ATTACKS NOSTRUMS

For the first time in the report of its activities to the House of Delegates a special section was introduced on the law suits of the Association. As has already been mentioned, these will be covered in a special chapter of this history. However, in accordance with the action taken by the Board of Trustees at its session in February, a special report had been prepared on the work of the Council on Pharmacy and Chemistry by a committee of the board, including Dr. W. T. Councilman, Dr. W. W. Grant and Dr. M. L. Harris. Following the presentation of this extensive report the Board of Trustees offered a resolution:

Resolved, We, Members of the House of Delegates of the American Medical Association, believe that every effort must be made to do away with the evils which result from the exploitation of the sick for the sake of gain. Earnestly believing that the continued toleration of secret, semisecret, unscientific or untruthfully advertised proprietary medicines is an evil that is inimical to medical progress and to the best interest of the public, we declare ourselves in sympathy with, endorse and by our best efforts will further the work which has been and is being done by the Council on Pharmacy and Chemistry of the American Medical Association in the attempt to eliminate this evil.

The House of Delegates not only endorsed fully the activities of the Council on Pharmacy and Chemistry and of the Board of Trustees in furthering its work but also advised all members of the medical profession to withhold their support from periodicals that advertised proprietary remedies not investigated and accepted by the Council.

SOCIAL INSURANCE

The report of the Judicial Council, under the leadership of Dr. Alexander Lambert of New York, was one of the most extensive in the history of the Association. This report was to have a tremendous effect on the future activities of the Association; it covered such serious topics as the disciplining of Fellows of the Association who received commissions from the manufacturers of drugs and instruments and who thus violated the Principles of Ethics. An elaborate report of many pages dealt with workmen's compensation laws, social insurance in Europe, compulsory sickness insurance and other forms of protection against the hazards of disease and injury. Many pages dealt with industrial insurance in the United States. Attention was called to the difficulties of European physicians, particularly those in Germany, in maintaining a high standard of medical care, insuring free choice of physician and similar basic factors. In concluding its report the Judicial Council stated that its whole purpose was education of the medical profession concerning the trend. The Judicial Council said "In whatever country the social equilibrium has been upset by new laws of compensation there have followed in the wake of compensation for accidents other insurances tending toward the complete insurance systems of England and Germany." The Judicial Council called attention to articles by I. M. Rubinow on social insurance and the medical profession which had been published in THE JOURNAL, and it continued "It is evident, therefore, that once the old

social and legal equilibrium has been upset, society tends to follow to the logical conclusion until it reaches a new equilibrium under a new social system." The Judicial Council indicated that we had in the United States a disjointed mass of insurance schemes and pension systems and that in several countries abroad these various social elements had been combined into a single form. The report said:

> In several countries abroad the same various social elements have been combined into some form of workable adaptability by which various accident and sickness insurance, invalidism and old age pensions have been brought together to form social forces which have tended to reduce the destitution of large masses of human beings. These forces unquestionably tend to improve the social condition in any given community, and, for the carrying out of any scheme tending to human betterment, the medical profession must necessarily be included, whether it be to judge of sickness or health insurance, whether it be for the prevention of the intensity of injury in the individual from accident or for the prevention of the spread of disease in a community at large. The medical profession will accept its responsibility in these new social conditions as it has always accepted its responsibilities in the past. The Judicial Council therefore presents this abstract of existing social insurance in this country and abroad.

The reference committee which considered this report recommended that the constituent state societies bring it to the attention of their members as a *"vade mecum* on these important social economical problems."

THE COUNCIL ON HEALTH AND PUBLIC INSTRUCTION

Again the Council on Health and Public Instruction had an extensive report on public health conditions in the United States, public education, the vast work of its speakers' bureau, its bureau of literature, its sections on legislation (both state and federal) and on the work of its many subcommittees. The Council felt that the most valuable work it had done was the coordination and harmonizing of the work of different organizations. There were reports of committees on women's and children's welfare, cancer, expert testimony, the National Education Association, the conservation of vision and similar subjects.

REORGANIZATION OF SECTIONS

Significant also at this session was the effort of a committee headed by Dr. Hugh Cabot to reorganize the work of the scientific sections. The Association must provide not only for the highly trained specialists but also for great numbers of general practitioners to whom it represented their one scientific organization. The committee recommended the establishment of a standing committee or council on section work. This recommendation was accepted by the House of Delegates. The result was the establishment of the Council on Scientific Assembly, which has, since that time, been of the utmost significance in advancing the scientific programs of the Association.

INFANT FOODS

Much attention was attracted by a resolution to control the advertising of proprietary infant foods. Several resolutions urged participation by the Association in the work of medical milk commissions with a view to improving the quality of milk supplied to the nation.

THE NATIONAL BOARD OF EXAMINERS

In his address at this session of the Association Dr. William L. Rodman had recommended the establishment of a national board of medical examiners. The committee to which the report was referred recommended that it be submitted to the House of Delegates for approval. A minority report suggested reference instead to the Council on Medical Education. This report was adopted and the American Medical Association took part, through the Council, in the establishment of the National Board of Medical Examiners.

HARRISON ANTINARCOTIC LAW

The antinarcotic law known as the Harrison Law had been passed and approved on Dec. 7, 1914. The Council on Pharmacy and Chemistry recognized the weaknesses of this law in permitting the sale and use of narcotics when contained in proprietary and stock preparations. On recommendation by the Board of Trustees, the House of Delegates took action to bring this matter to the attention of the Congress of the United States, so that the indiscriminate sale of proprietary and other preparations containing narcotics should not be permitted.

GRADUATE INSTRUCTION

In his address to the House of Delegates President Victor C. Vaughan had indicated the great desirability of participation by the American Medical Association in sending teams of clinical teachers to the individual states to bring general practitioners up to date in medical practice. The Board of Trustees was told to take the matter in hand. Out of that suggestion came a procedure still followed in many states for extending graduate education of physicians in rural areas.

1916

DETROIT; SICKNESS INSURANCE

The first subject to come before the meeting of the trustees early in 1916 was national legislation on sickness insurance. Drs. Alexander Lambert and Henry B. Favill appeared before the board to speak on the subject. Bills had already been introduced in Massachusetts and New York. It was recognized that the relation of the medical profession to any plan of sickness insurance was vital. A special committee appointed jointly by the Council on Health and Public Instruction and the Judicial Council was established to have charge of this investigation; the Board of Trustees requested submission of the plan and of a budget.

The agitation for a presiding officer in the House of Delegates was brought before the Board of Trustees; the Board rightly said that the decision would have to be made by the House of Delegates.

The joint committee on sickness insurance presented a statement. It pointed out that the purposes and duties of this committee would be to make a careful compilation of information concerning health and social insurance and the relation of physicians thereto and to do everything in its power to secure such constructions of the proposed laws as will work the most harmonious adjustment of the new sociologic relations between physicians and laymen which will necessarily result therefrom. The committee was given great power to study and to act and an adequate budget to meet all of its needs. It was also recommended that full publicity be given to its work.

In the course of the year President Rodman had died; the vice president, Dr. Albert Vander Veer of Albany, then over 80 years old, served thereafter as president.

ADVERTISING BY PHYSICIANS

As an indication of its seriousness in considering infractions of the Principles of Ethics, the Judicial Council reported publicly that it had taken action in 2 cases involving the charge of grossly advertising in the public press. One of these involved a physician of Wichita, Kan., who was dropped from the Fellowship roll of the American Medical Association. The second case was that of a former President of the Association, Dr. John B. Murphy of Chicago. Charges had been brought before the Judicial Council that the accused had caused or permitted to appear in a publication with which his name was connected photographs and an article which violated the Principles of Medical Ethics in that they were self laudatory and defied the traditions and were contrary to the ideals of the medical profession. The Judicial Committee condemned this publication as being offensive and in bad taste. Because the testimony indicated that the publication complained of was not intended by the accused to be self-exploiting advertising, the Judicial Council accepted his explanation and apology.

MEDICAL PREPAREDNESS

The most important aspects of the address made by Dr. Vander Veer concerned the preparedness of the medical profession in relation to the threat of war. As Acting President of the Association he had cooperated with other organizations in appointing a strong committee of American physicians to consider plans for civilian medical preparedness. Repeated conferences had been held. Already suitable boards and committees had been established to confer with the President of the United States and to offer to him the services of the medical profession. President Wilson had expressed himself as much pleased with the patriotic actions of the medical profession and assured Dr. Vander Veer that the government would avail itself of the services that were tendered. Base hospitals were being formed, and four such units were ready for mobilization.

PROHIBITION

Through the office of the secretary there came to the House of Delegates a plea for cooperation by the medical profession in combating the liquor evil.

THE BOARD OF TRUSTEES

In its report to the House of Delegates the Board of Trustees called attention to the relationship of the profession to the social state. The Board indicated that it had granted a considerable sum of money mainly for acquiring information. The Board of Trustees said:

> We are entering on a period of great changes in social organization; a period which will necessitate a far closer organization of the people in all forms of activity, and this particularly calls for united strength in opposing disease. It is true we have not so strongly felt the necessity for this as have other nations, but the time has come when we can no longer resist the social movement, and it is better that we should initiate the necessary changes than have them forced on us. On such information, laws regulating social medicine, which will be just both to the medical profession and to the public, whom it serves, must be based. All of our councils have worked in perfect harmony with other bodies, often outside of the profession, which have had the common good in mind.

SPEAKER OF THE HOUSE OF DELEGATES

The Judicial Council recognized the desirability, if not necessity, of having for the House of Delegates a presiding officer familiar with the transactions and also with the best methods of expediting the work of the House. The Judicial Council, therefore, recommended that the House take up the election of a speaker and proposed the necessary amendments to the Constitution and By-Laws to make this possible. The House of Delegates approved these recommendations.

COUNCIL ON HEALTH AND PUBLIC INSTRUCTION

In furtherance of the obligations placed on it, the Council on Health and Public Instruction had made a survey of state public health activities begun in 1914 by Dr. Charles V. Chapin. This included a rating sheet of the forty-eight state health organizations and exhaustive tabulations of their various activities, appropriations and expenditures. This action marked the beginning of a movement for elevation of the field of public health as did the first report of the Council on Medical Education in education. A request had come for a similar survey of municipal health departments, but the Council had not been able to devise any feasible plan for the purpose. An attempt had been made also to survey voluntary public health organizations. Such a report had been prepared and published and it had been accepted by the American Public Health Association.

The committee was discharged and a new central committee on public health organization was established to continue such studies. The efforts of the Council in the direction of cooperation had borne fruit; many leading organizations were cooperating fully with the medical profession.

Significant was the report of the subcommittee of the Council dealing with social insurance! Understatement indeed was the opinion that this subject would in all probability be one of the most important to occupy the attention of the medical profession in the next few years both from an economic and from a medical point of view.

The Council had secured the services of I. M. Rubinow, Ph.D., who was chief statistician of the Ocean Accident & Guarantee Corporation and president of the Actuarial Society, as an executive secretary; it had opened a bureau for study of social insurance in New York City. The Council presented a statistical study of the medical profession of the United States. It pointed out, however, that there were not available reliable figures concerning the incomes of physicians and other economic facts of interest. It proposed

> to educate the American medical profession in the general principles of social insurance, particularly health insurance, the economic and social significance of the movement to obtain such insurance throughout the United States, and the absolutely essential part which the medical profession must play in a successful adaptation of this new legislation to American conditions.

It seems to have been rather taken for granted that such compulsory sickness insurance laws would be passed in the United States. The committee felt that it should work to avoid the conflicts that had arisen in England at the beginning of a similar movement and which had resulted in a large amount of bitterness between the profession and the public that might easily have been prevented by properly conducted activities.

In its report on social insurance the committee, under the chairmanship of Dr. Alexander Lambert, presented a statement more than thirty-five pages long opposing voluntary sickness insurance and agreeing that only compulsory state insurance would reach the group of people who needed help most. It then discussed in detail the compulsory insurance schemes of all foreign countries in which such systems prevailed, with the

majority of the emphasis on the comprehensive system in Germany. The major portion of this extensive report had been prepared by Dr. Rubinow. The report concluded with a consideration of conditions prevailing in the United States for protection against the hazards of sickness among trade unions, lodges, fraternal societies, commercial insurance companies and similar agencies. The report was inclined to accept the conclusion of Drs. B. S. Warren and Edgar Sydenstricker that the democratic character of an effective health insurance system is most pronounced in a governmental system. It was agreed that the experience of European nations with health insurance had shown that governmental systems were the only systems which accomplished the purpose desired. Then came the health insurance act developed by the American Association for Labor Legislation. The report concluded with a general comment to the effect that it had made no attempt to bring together the advantages or disadvantages or to argue for or against health insurance. It favored the German system over that in England and it said

> However one may criticize the details, the insurance act has unquestionably improved the health of the working classes which have come under the law.

When this extensive report was turned over to the Reference Committee on Legislation and Political Action, under the chairmanship of Dr. E. J. Goodwin of Missouri the reference committee recognized the exhaustive character of the report. It was proposed that the Council on Health and Public Instruction should continue to study the subject and to educate the profession concerning it. The reference committee approved such study and approved further establishment by each state association of a committee on social insurance to work in conjunction with the Committee on Social Insurance of the American Medical Association.

COUNCIL ON MEDICAL EDUCATION

Again the Council on Medical Education indicated its progress in merging poor medical schools, raising standards of education and eliminating schools of quackery. Here is a striking statement:

> The largest number of these institutions at present is found in Illinois, where conditions are especially favorable. Besides the class C medical schools which continue to exist there are in Illinois colleges of osteopathy, chiropractic, chiropody, naprapathy, somopathy, physcultopathy, refraction, optics and a legion of others, most of which have for their chief inducement elegantly printed diplomas conferring the degree of "doctor" of this, that or the other. The courses offered for such degrees are in some instances so notably a makeshift as to be ridiculous, and an insult to education. Some are offering courses under two or more titles, and others appear to be doing a retail business in dispensing degrees in all the "forms" or "systems" of healing which may have been or ever shall be enumerated.

The report urged the various states of the nation to protect themselves against such low grade institutions.

Pursuant to the recommendation that had been made by Dr. Rodman, the Council on Medical Education reported the organization of the National Board of Medical Examiners with the assistance of the Carnegie Foundation for the Advancement of Teaching.

A special committee to cooperate with the Red Cross had drawn up a complete arrangement for medical service through the Red Cross.

PUBLICITY AND THE ELECTION OF PRESIDENT

Much furor occurred in the House of Delegates at the meeting to elect officers when a Detroit newspaper announced that Dr. Charles H. Mayo would be elected President three or four hours before the election was held. The publicity had been issued without any activity on the part of Dr. Mayo; he was unanimously elected.

FROM THE MOUTH TO THE STOMACH AND RECTUM

As a recognition of changes in medical interest, the Section on Stomatology was discontinued and a new Section on Gastro-Enterology and Proctology was established.

THE WORLD WAR

The war was prominent on the final day of the convention. Physicians were informed that a citizens military training camp had been established at Fort Benjamin Harris, Indiana, to instruct doctors in field hospital and sanitation work. Citizens who wished to volunteer to attend this school could do so by paying $1 in addition to the cost of the uniform.

QUARTERLY CUMULATIVE INDEX MEDICUS

During 1916 the support of the Carnegie Foundation for the *Index Medicus* had been discontinued; as a result this valuable tool for workers in medical research was discontinued. At this time Dr. George H. Simmons, as a result of many conferences in Washington and elsewhere, proposed that the American Medical Association establish an index medicus to be published quarterly and cumulated. This would be a large responsibility for the Association. Dr. Simmons presented his proposal to the Board of Trustees, which authorized him to proceed with the publication. The full story of the QUARTERLY CUMULATIVE INDEX MEDICUS is told in another chapter.

ADMINISTRATION OF PATENTS

A resolution was passed by the House of Delegates authorizing the American Medical Association to accept and administer patents. Dr. E. C. Kendall of the Mayo Clinic had just discovered thyroxin, the active constituent of the thyroid, and wished to award the patent to the American Medical Association. This patent was accepted. At a later date, however, it was realized that the function was quite outside the scope of a body such as the American Medical Association. The patent was returned, and the Association has not since undertaken such an activity.

Dr. Charles Mayo, now President of the Association, offered the Association $25,000 which had been contributed by Mr. R. T. Crane for the discovery of the cause and best cure of infantile paralysis. The Association tentatively accepted the funds and the obligation.

1917

NEW YORK CITY

By 1917 the Scientific Exhibit had grown so greatly that the recommendation was made to the Board of Trustees that there be established a special committee on scientific exhibit. The story of the Scientific Exhibit is told also in another chapter.

In this year action was adopted that all papers read at the annual session be treated as volunteer contributions and that they be published in full in THE JOURNAL or rejected or published in abstract, as might seem best. This step was fundamental in improving the quality of THE JOURNAL.

Petitions had come for the publication of journals devoted to ophthalmology and otolaryngology; the board took these under advisement.

The Committee on Social Insurance had found itself heavily obligated because of the thousands of studies necessary. It indicated a wish for additional funds and also the necessity for a full time executive secretary.

When the Association convened in New York in the midst of the war the President of the Association, Dr. Rupert Blue, Surgeon General of the U. S. Public Health Service, told of the activities in which he had participated in the prosecution of the war. Committees had been set up in the various states to cooperate with the Red Cross. A committee of three, consisting of Drs. Arthur Dean Bevan, Alexander Lambert and J. W. Kerr, had been constituted to report on the best way of utilizing the records and activities of the American Medical Association. Letters had been addressed to the presidents and secretaries of all the component medical societies urging them to secure medical officers for the armed forces.

THE FIRST CHAIRMAN OF THE HOUSE

The first chairman of the House of Delegates, Dr. Hubert Work, presided. In his opening address he announced his concept of the functions of the office. His was a statesmanlike presentation, free from any political connotations. It established the standards for functioning of the speaker of the House of Delegates since that time.

Most of the report of the Board of Trustees was concerned with the problem of publication of the section papers. Their number had become overwhelming; the price of paper had grown so greatly that it was not possible with financial safety to publish all the papers. The Board of Trustees informed the House of Delegates that it had passed the resolution relative to volunteer contributions. The editor had been authorized to refer highly specialized papers to the special journals. The board also announced its decision to publish a journal of ophthalmology and otolaryngology.

THE LIBEL SUIT

Then came a report on the defense against the libel suit, which had lasted thirteen weeks. The result was satisfactory not only by the moral standard but also in its financial aspects. Nevertheless the cost of the trial was so great that the auditor's report showed for the first time in twenty-five years an operating loss in the finances of the Association. Fortunately the expense was met largely out of current receipts without impairing the reserve funds of the Association. Nevertheless the Board said:

> This trial demonstrated the wisdom of having a large reserve fund on which to fall back, for the existence of this fund gave courage to carry on a vigorous defense to a successful end. This leads us to suggest that the reserve fund should be still further increased. In times of adversity the absence of such a fund might badly cripple us or force us to suspend temporarily all altruistic work. Not all years are "fat" with prosperity; "lean" years are bound to come, against which provision must be made. No one can foretell the end of the critical period upon which this country has entered; but it is easy to foresee the possibility of a diminished income to the Association. It is quite possible that a large number—perhaps several thousand—of our Fellows will be called to the front for an indefinite period, during which time it is more than likely that there will be a considerable falling off in the subscriptions to THE JOURNAL. Hence it behooves us to husband our resources that there may be no interruption in our more desirable and important activities.

In concluding its report the Board of Trustees presented a memorandum on the death of Philip Mills Jones of San Francisco on Nov. 27, 1916. He had attended a meeting of the Board of Trustees on November 3 and was in his usual good health. Then within three weeks he was dead from pneumonia, and his wife died from the same disease within twenty-four hours. Dr. Philip Mills Jones had become one of the most ardent advocates of clean advertising, although previously favoring a national joint council. He had become so interested in the legal aspect of medical problems that he took up the study of law late in life; in the year previous to his death he had been admitted to the California bar.

THE WAR CHECKS ACTIVITY

As temporary chairman of the Council on Health and Public Instruction, Dr. Frank Billings presented the report which was greatly condensed, occupying now only two pages of THE JOURNAL. Dr. Frederick R. Green, who had been most active as secretary of this body, had volunteered for military service and had been given a leave of absence by the Board of Trustees. The demands of the war had greatly curtailed all the activities of the Council. Nevertheless, the committee on social insurance presented a report occupying thirty-five pages under the auspices of Dr. Alexander Lambert, the chairman. Two state commissions—California and Massachusetts—had investigated health insurance and had reported favorably on it. Health insurance measures had been introduced into the legislatures of fourteen other states. Most of the extensive report dealt with conditions in Germany. It considered not only health insurance but old age protection and unemployment insurance. The pattern in foreign countries had been a beginning with voluntary insurance, which proved inadequate, then voluntary insurance subsidized by the state, which, although more successful, was still inadequate and, finally, full compulsory insurance. Poorly concealed throughout this report is a plea for early adoption of compulsory sickness insurance in the United States. For instance, the report said:

> Regarding social insurance as a whole, this country is still in the stage of investigation, but the rapidity with which, after a few years—less than a decade—protection against industrial accident was taken up and adopted shows clearly that when the idea is once understood and grasped how rapidly it appeals to all nationalities, although a few years ago the accident insurance was condemned as un-American and the same adjective is being used against the other forms of social insurance today as they are discussed. It has been a noticeable feature that all official investigations in this country have led to the approval of at least the basic principle in the movement for social insurance. There is no question that the enormous modern industrial development has increased the hazards of the wage earner and has increased also the dependence of a large part of the population on their own physical well-being and working capacity. This country today still possesses the strongest development of individualism, but so great has been the collective development of industry and so strong the collective development of labor that the collective protection of the individual against a universal hazard has found ready and vigorous support.

In concluding its report the Council condemned the *Boston Medical and Surgical Journal* for suggesting that medicine be eliminated from social insurance laws. It felt that the intense reaction in many states against sickness insurance or further expansion of social insur-

ance laws in this country was due to the unjustness and cold blooded methods of unfairness under the workmen's compensation laws. The report said, in part:

> Blind opposition, indignant repudiation, bitter denunciation of these laws is worse than useless; it leads nowhere and it leaves the profession in a position of helplessness if the rising tide of social development sweeps over them. The profession can, through its influence in the community, prevent for a time these laws being passed and it can, by a refusal to cooperate, still further retard them, but in the end the social forces that demand these laws and demand an improvement in the social existence of the great mass of the people of the nation will indignantly force a recalcitrant profession to accept that which is unjust to it and that which is to its detriment.
>
> The profession today, in certain states, is acting the part that our school boy history showed of old King Canute sitting on the seashore bidding the rising tide to stop, and King Canute only got wet for his trouble.

The report ended with a resolution:

> *Resolved,* That the House of Delegates of the American Medical Association in the interests of both the wage earners and the medical profession authorize its Council on Health and Public Instruction to continue to study and to make reports on the future development of social insurance legislation and to cooperate, when possible, in the molding of these laws that the health of the community may be properly safeguarded and the interests of the medical profession protected; and be it further
>
> *Resolved,* That the House of Delegates instruct its Council on Health and Public Instruction to insist that such legislation shall provide for freedom of choice of physician by the insured; payment of the physician in proportion to the amount of work done; the separation of the functions of medical official supervision from the function of daily care of the sick, and adequate representation of the medical profession on the appropriate administrative bodies.

The reference committee expressed its appreciation of this report and recommended the adoption of the resolutions, which recommendation the House of Delegates followed.

This was not a rejection of compulsory sickness insurance; it seems to have been a qualified acceptance. It favored the adoption of compulsory sickness insurance subject to acceptance of the principles related to medical practice which were involved. Behind this report was the influence of Dr. Rubinow. Later came complete repudiation.

THE SECTIONS

Attempts were still being made by the first Council on Scientific Assembly, which included in its membership Drs. E. Starr Judd, chairman, Roger S. Morris, George H. Simmons, J. Shelton Horsley and Alexander R. Craig, to organize and coordinate the work of the sections and to assign them relative importance in the number of papers permitted in each. An attempt was made, in fact, to adopt the system which prevailed in Great Britain by which some sections would meet twice, others as often as six times during the session. The reference committee of the House of Delegates accepted the report of the Council on Scientific Assembly with the exception of that portion which distributed units to the different sections. Some of the representatives of the various sections insisted that two units were too few; three units were made the minimum. Later in the session the Section on Preventive Medicine and Public Health objected to being limited to three units and asked for six units, which the House promptly gave it.

THE WAR

Now came resolutions on participation by the medical profession in the war, on the care of infants and children during the war, and on provision of insignia for medical students so that they could continue their studies without being called cowards and slackers.

Other resolutions concerned the operation of quarantine during the war and the appointment of a food commission to act in an advisory capacity to the government in controlling food supplies during the war.

ORGANIZATION OF ARMY MEDICAL SERVICE

In a statesmanlike address to the House of Delegates, Dr. Frank Billings urged the establishment of a committee of five to formulate resolutions whereby better protection could be given to guarding the health of our soldiers. The position of the medical officer in relationship to officers in the line was not such as made it possible for him to secure action on recommendations definitely concerned with the prevention of epidemics. The suggestion of Dr. Billings was unanimously adopted. Many years passed following World War I, and the same difficulties that caused so much distress at that time arose in World War II.

The House of Delegates gave complete support to the Board of Trustees in establishing new journals to be devoted to otolaryngology and ophthalmology.

AIDING THE DRAFT

A special meeting of the Boards of Trustees was called in October 1917 to consider a proposal submitted by the War Department through the Provost Marshal General requesting the aid of the American Medical Association in organizing medical boards to conduct medical examinations in connection with the draft. The Board of Trustees accepted the invitation to cooperate with the Provost Marshal General as presented in the letter from Lieut. Col. Hugh S. Johnson, Judge Advocate. A committee of three was appointed to cooperate: Drs. Hubert Work, M. L. Harris and E. J. McKnight. The action was submitted by telegram to the members of the House of Delegates. The committee was empowered to call a meeting of the representatives from every state medical association to discuss the selection of suitable men to constitute such advisory boards. The American Medical Association bore the entire cost.

DAVIS MEMORIAL FUND

Dr. William Allen Pusey appeared before the Board and spoke in behalf of combining the funds held to honor the memory of N. S. Davis by the American Medical Association and the Chicago Medical Society, with a view to establishing a lectureship.

THE POLIOMYELITIS PRIZE

Many applicants had applied for the prize of $25,000 offered by Mr. R. T. Crane to any one who would discover the cause and cure of infantile paralysis, but none had presented sufficient evidence to warrant his being given the prize.

WORLD WAR I

On April 7, 1917 THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION noted that war was imminent and called on the medical profession for volunteers.

It published the reports dealing with the organization of the Council of National Defense and of the Committee of American Physicians for Medical Preparedness. Dr. Franklin H. Martin had, according to the reports, been selected by a committee of distinguished physicians as the medical representative on the advisory commission of the Council of National Defense. Dr. Frank F. Simpson had been selected as chief of the medical section of the Council of National Defense. Dr. Franklin H. Martin, as chairman, had created an advisory committee which included Drs. W. C. Gorgas, W. C. Braisted, Rupert Blue, J. R. Kean, W. H. Welch, W. J. Mayo and Frank F. Simpson. Dr. William J. Mayo had, in turn, become chairman of the American Physicians for Medical Preparedness, which had organized a special committee of nine men in each state and, under this, county committees. Obviously in this setup the headquarters organization of the American Medical Association had been rather definitely ignored. When it came to functioning, however, the committee was dependent on THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION as its voice and on the biographic files of the American Medical Association as the one available source for accurate information concerning the physicians of the United States.

In the issue for April 14 THE JOURNAL discussed in many editorials the organization of the medical department of the Army. The advisory commission of the Council of National Defense would have to utilize the county and state medical societies to carry out the mobilization, and THE JOURNAL urged full cooperation. By this time also Dr. Franklin H. Martin had decided to appoint a general medical board to cooperate with him in coordinating civilian medical activities and to advise with regard to fundamental medical problems in relation to the armed forces of the country. This board included a membership of twenty-four, among whom the only representative of the American Medical Association was Dr. George H. Simmons. In the April 14 issue of THE JOURNAL a special department was created entitled "Medical Mobilization and the War." From that time on many pages were given in each issue to military problems.

In the issue for April 21, by which time war had been declared, THE JOURNAL published a form for application for the medical corps of the Army and also for appointment in the officers reserve corps. An editorial called on physicians of the country to meet the needs of the armed forces. There were reports on the work of the general medical board and on the standardization of general medical supplies; again many pages were occupied by information on medical military activities.

By this time THE JOURNAL began a series of articles which were prepared by Colonel McKnight, who had been assigned to the headquarters of the American Medical Association as a liaison officer. The series was entitled "The Medical Officer of the Army." Later the series of articles was collected in book form and widely used in extending knowledge of military activities to the civilian medical profession.

As the weeks went by THE JOURNAL adopted many technics for promoting interest in medical service, appealing with slogans and editorials to the medical profession. There had been an excellent response to the publication of the application blank. Clearly, however, the greatest function of the American Medical Association in mobilization had been the utilization of THE JOURNAL. Its officers had been largely ignored in places of importance in the mobilization for war. Dr. George H. Simmons, the editor, had been assigned a relatively inconspicuous position on the subcommittee which had to do with assignment of personnel.

It would be impossible to overemphasize the tremendous value of THE JOURNAL, with its extensive circulation, as the important medium in maintaining the dissemination of information concerning military activities and in inspiring the medical profession to the utmost fulfilment of its obligation. The names of all physicians who were enrolled and their assignments to camps were promptly recorded. Special articles dealt with almost every phase of military service. The organization of the base hospitals and the enlistment of physicians in their units were constantly recorded. The formation of the medical officers training camps was fully described, and visits were made to these camps for full reporting of their activities. Special articles were published from the officers in charge of the British and French medical departments. THE JOURNAL enlisted in the campaign for conservation of food. One finds, late in 1917, full page photographs of the medical officers training camps and all of the physicians in attendance. Once more began the campaign for adequate rank for physicians. Week by week the news from every medical front was reported. It is doubtful that there could have been any single effort more important in maintaining medical morale than were the many pages assigned by THE JOURNAL to medical military activities. THE JOURNAL published week by week the orders to medical officers. These were carefully systematized according to the individual states from which the officers came. It required an extensive organization in the editorial functions of the Association to carry out these activities. The Army itself developed no mechanism for contact with medical officers, nor did the Navy. THE JOURNAL during World War I published the photograph and biography of every physician who gave his life in the armed forces, and this procedure was followed also in World War II.

In April 1918 the American Medical Association called a war conference of the secretaries of the constituent state associations. By this time the government had realized the necessity of utilizing the American Medical Association more and more in the enrolment of medical officers. The primary purpose of the conference of secretaries was to enlist the necessary physicians to meet the national need.

An extraordinary contribution was publication by THE JOURNAL of June 1, 1918 of a complete list of civilian physicians in military service, with a tabulation of enrolment by counties and states. The Section on Miscellaneous Topics at the annual session in June was devoted wholly to the reconstruction and rehabilitation of disabled soldiers. When the annual session met in Chicago, a special feature was a military meeting held in the Medinah Temple, at that time the largest assembly hall in Chicago. Over this medical military meeting Dr. Arthur Dean Bevan, President of the Association, presided. Addresses were made by Gen. W. C. Gorgas, Sir James Mackenzie, Sir Arbuthnot Lane, Col. Herbert Bruce of the Canadian army, Major Edouard Rist of the French army, Capt. René Sand of the Belgian army, Admiral William C. Braisted, Surgeon General of the Navy, and President Ray

Lyman Wilbur of Stanford University. Dr. Wilbur was especially concerned with food. The final address was made by Major Alexander Lambert, who spoke of the work of the Red Cross.

Another meeting, known as the Patriotic Meeting, was held in the Auditorium Theater. Here Dr. Ludvig Hektoen, president of the Chicago Medical Society, presided, and addresses were made on "Science and the War" by Professor John M. Coulter of the University of Chicago, "The Law and the War" by Judge Charles S. Cutting and "American Ideals" by Bishop Charles P. Anderson.

As the war neared its end, THE JOURNAL became more and more concerned with problems of medical education. Fortunately the war ended in November. The brevity of the American participation made unnecessary the serious considerations that disturbed the profession during World War II, when medical education suffered severely. In World War I, 35,000 physicians had participated. Almost immediately with the end of the war, THE JOURNAL began calling for the formation of a competent medical reserve corps.

1918

CHICAGO

Early in 1918 the Board of Trustees was mostly concerned with its relationships to the Council on National Defense and to the office of the Provost Marshal. Few activities developed in the American Medical Association. As told elsewhere, Dr. Franklin H. Martin had been alert in hastening to Washington; leadership began and remained with him and leaders of the American College of Surgeons.

A SPANISH JOURNAL

Among new projects brought to the attention of the Board was the possible publication of THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION in Spanish, to be circulated in South and Central American countries. Through negotiations by Dr. George H. Simmons with the Rockefeller Foundation, this project was undertaken; Dr. A. A. Moll was selected as editor and the choice of material was assigned to Dr. Morris Fishbein.

NEUROLOGY AND PSYCHIATRY

The Board of Trustees authorized also the publication of a journal of neurology and psychiatry, and an editorial board was selected for that periodical.

STANDARDIZATION OF HOSPITALS

It was suggested that the Council on Medical Education undertake standardization of hospitals.

AN AUTO EMBLEM

The Board authorized the manufacture and distribution of an automobile emblem for physicians.

WAR SERVICE

The editor and general manager or the secretary were authorized to visit Washington whenever necessary to coordinate more closely the activities of the Association with governmental departments. A special report was made by the war committee, and a resolution was introduced approving the creation of a world war medical conference organization.

THE WAR MEETING

The 1918 war meeting of the Association was held in Chicago in the offices of the American Medical Association. All five members of the Council on Health and Public Instruction and its secretary were in service, and the activities of the council had been limited to routine work. Its report was brief and the entire section on social insurance had disappeared. It is interesting to think what might have happened relating to social insurance if the war had not intervened.

The President, Dr. Charles Mayo, was also in the armed forces. He felt that there was bickering and disturbance in the profession and a lack of harmony, and he urged cooperation in the battle against Germany. The undercurrent of his address referred to the competition between Dr. George H. Simmons and Dr. Franklin H. Martin, although neither was mentioned by name. He pleaded particularly for coordination between the seventeen different government agencies concerned with medicine.

Dr. Hubert Work, chairman of the House of Delegates, spoke briefly on the war situation and announced that he would present later the report of the war committee. He called the selective draft "the colossal achievement of the times," and he paid high tribute to Gen. Enoch H. Crowder for his magnificent conduct of the draft and also to William C. Gorgas, Surgeon General of the Army.

The secretary of the Association, Dr. Alexander R. Craig, reported on the appointment of the war committee and recommended that it be continued so that it might act for the Association in all matters pertaining to placing the Association at the service of the government for the war. He indicated the numerous facilities in the headquarters of the Association which could be useful to the government and how particularly the biographic data had been utilized in finding physicians for the armed forces.

THE PUBLICATIONS

The Board of Trustees emphasized the growth of the publications and emphasized the number of law suits which had been filed against the organization and the manner in which they had been handled in the courts. The active work of the Association in codifying and supplying to the profession and the public information concerning quackery, fraudulent medicines and low standard medical colleges had resulted in threats, intimidation and actual suits. There were six libel suits in sums of $100,000 each.

THE LYDSTON CASE

The Board submitted also a complete record of the case that had been filed by Dr. G. Frank Lydston to oust the trustees of the American Medical Association from office because they had been elected outside the state of Illinois. That case had been decided by the Supreme Court of the state of Illinois in favor of the American Medical Association.

PATENTS

A fundamental decision reported by the Judicial Council objected to the acceptance of a patent by the American Medical Association. It declared against the patenting of a medical discovery for commercial gain, and it said "The ethics of patenting a medical discovery

is not overshadowing or affected by the use to which the returns from the sale of the patented medicine may be put." Indeed, the Judicial Council declared that it was unethical for the University of Minnesota to accept patents on medical discoveries and that it would be unethical for the Mayo brothers on their part to consummate an agreement of this kind if they would be patenting a medical discovery and using the commercial proceeds therefrom to increase a fund given to the university by them.

The House of Delegates rejected the recommendation of the Judicial Council relative to patents, believing that the Mayo brothers had made their offer in good faith and in the spirit of altruism. It was felt that whatever the University of Minnesota did was a problem for the University of Minnesota.

A NURSE SHORTAGE

Already in World War I there began to be a shortage of nurses, and a resolution was submitted requesting the establishment of a committee to consider the whole question of registering and training nurses with a view to standardizing and simplifying the requirements and with a view to establishing a grade of practical nurses who would receive smaller compensation and take care of the sick, thus relieving graduate nurses for war work.

The meeting approved the commissioning of women physicians in the Army. A resolution was adopted, as offered by Dr. John Ridlon, urging universal military training before the right of suffrage was granted.

In 1918 an amendment to the Constitution had provided for changing the name of "chairman" and "vice chairman" of the House of Delegates to "speaker" and "vice speaker."

At the 1918 meeting Dr. Charles H. Mayo, who was at that time the President of the Association, introduced a resolution into the House of Delegates providing for an ad interim committee to deal with emergency problems, this committee to consist of the President, the president-elect, the chairman of the House of Delegates, the secretary of the Association, the last two living retiring presidents and the chairman of the Board of Trustees. He also proposed that the President of the American Medical Association be authorized to appoint members of committees not provided for by the House of Delegates or the Board of Trustees and that their work be passed on by the ad interim committee. The reference committee on amendments to the Constitution and By-Laws approved this amendment with the exception that they put the last two living ex-presidents on the committee and made it possible for committees appointed by the President to have official existence only until the next meeting of the House of Delegates.

In November 1918 a meeting of the war committee convened in Washington and was reconstituted as a meeting of the Board of Trustees. Since the Armistice had been signed, the war committee was instructed to take steps for using the American Medical Association to constitute a real medical reserve corps, and a special committee was developed for that purpose. When World War II came, the reserve corps had some 18,000 members, but unfortunately 9,000 were incapable of giving active service.

The Association planned for a Victory Meeting in 1919 with distinguished guests from abroad. It was suggested that the Department of State issue invitations to the allied nations to send delegates. Requests were made particularly to invite physicians from the South American nations.

1919

ATLANTIC CITY

Dr. Frank Billings reported for the committee which had been appointed to consider standardization of hospitals that it seemed desirable that such standardization be undertaken in cooperation with the American College of Surgeons. It was felt that it would be desirable to employ a full time man to do this work

SOCIAL INSURANCE

Then came the question of social and health insurance. A special message had come from the president of the Pensylvania State Medical Association and from Dr. Alexander Lambert indicating that the situation was becoming pressing. The statement by Dr. Lambert attacked particularly Dr. Edward H. Ochsner of Chicago, who had been the leading opponent of compulsory sickness insurance. Dr. Lambert attacked the Insurance Economic Society of America as the principal camouflage organization now conducting a vigorous campaign against social insurance. Dr. Wendell Phillips called attention to an editorial which had appeared in THE JOURNAL for Feb. 1, 1919 entitled "The Failure of Compulsory Health Insurance." He felt that it did not present the entire subject. Dr. Alexander Lambert, now president-elect of the Association, called attention to the eight pamphlets already published and to the four basic points which he felt must be included in any social insurance system which would be approved by the medical profession.

A SURGICAL JOURNAL

Now that the war had passed there came again a call for the publication of a special journal dealing with the philosophy of surgery in contradistinction to surgical technic. Dr. Lambert urged that such a journal would not be in competition with any journal then being published.

Conferences began to be held between representatives of the American Medical Association and the American College of Surgeons on the standardization of hospitals with a view to cooperation and avoidance of duplication.

In 1918 Dr. Frank Billings, who had served in many capacities, including the presidency of the Association, was elected to the Board of Trustees and his place on the Council on Health and Public Instruction was given to Dr. Ludvig Hektoen.

The Spanish journal had been conducted for three months with considerable success. The Association had distinguished itself in defending a suit brought by Jenner Medical Colleges for $500,000 damages.

It was felt desirable that the Board of Trustees publish regularly a digest of its minutes in THE JOURNAL and that it would have served a good effect on the medical profession if the report of the conference with the American College of Surgeons had been given adequate publicity in THE JOURNAL.

It became clear that little could be expected in the way of having delegates from foreign countries at the Victory Meeting. Response had been poor, and the secretary of the Association was authorized to send cables to various governments requesting attendance of foreign guests at the 1919 meeting.

The speaker of the House of Delegates made a long address in which he discussed the problems created by the war and the return of men from the war. He recognized the growth of groups of physicians in practice and the evolution of the hospital. He predicted that the greatest future concern of the Association

might be in its direction and oversight of hospitals. He suggested the possible establishment of a council on hospitals to be concerned with control of such organizations and with a view to possible elimination of the joint survey of hospitals conducted by the American Medical Association and the American College of Surgeons. He recognized the problems created by the increasing length of the curriculum, and he feared that the duration of medical education was becoming too great. He was equally concerned with the difficulty of securing competent nurses at reasonable costs, and he viewed with alarm the tendency toward specialization and the disappearance of the general practitioner. He conceived it to be the duty of the American Medical Association to assure to the public qualified physicians, nurses and standardized hospitals at prices it could afford to pay. He spoke also of problems in the field of physical education, noting that 30 per cent of registrants appearing before local boards were rejected for military service—a situation which was still a matter of concern in 1946. He was especially concerned with the problems of dentistry as they related to the draft, and he thought the time ripe to give serious consideration to provision of medical care in rural areas.

Dr. Arthur Dean Bevan, who was President of the Association, had been chosen no doubt in recognition not only of his eminence in the field of surgery but also for his many years of leadership in the Council on Medical Education. Both Dr. Work and Dr. Bevan called attention to the manner in which physicians had pledged themselves to the nation for service. He indicated, however, that there must be much closer relationship between the national organization and the individual state organizations. Through the Council on Medical Education a national conference on hospital problems had been developed; this had been of great service through the years in clarifying problems in the hospital field. Dr. Bevan recognized the prominence of THE JOURNAL but he urged again particularly a periodical to be devoted to surgery. As will be seen later, this intensified the competition between the Association and the American College of Surgeons. Dr. Bevan felt that the publication of a surgical journal by the American Medical Association would merely tend to improve all other surgical publications in the field.

In his address as president-elect, Dr. Alexander Lambert announced that he had but two recommendations to make. He urged first a journal on surgery and, second, a popular journal in the field of health—thus intensifying the drive toward such a publication, which had been going on for many years. More particularly he then devoted himself wholly to problems of narcotic addiction; he recommended resolutions leading toward a national conference on the control of narcotic drugs.

The secretary of the Association, Dr. Alexander R. Craig, was concerned with the manner in which physicians returning from the war were being received by their communities.

The introduction by the American College of Surgeons of the letters F.A.C.S. to designate its members had raised the question of a similar designation for fellows of the American Medical Association. The secretary of the Association, therefore, proposed a variety of designations to indicate various qualifications of membership in the American Medical Association.

The Board of Trustees indicated great progress, first by the fact that there had been no loss of membership or subscription to THE JOURNAL during the war. The Spanish edition had been established and had reached a circulation of more than 1,400. The QUARTERLY CUMULATIVE INDEX MEDICUS was operating at a small loss. The Association had been successful in all its law suits. The board announced the decision to develop a new building by adding to its quarters.

At this time the Judicial Council proposed amendments which would more definitely define membership and fellowship in the American Medical Association and which would clarify its wording.

COUNCIL ON HEALTH AND PUBLIC INSTRUCTION

Since the Council on Health and Public Instruction had been relatively inactive during the war because its secretary and most of its members had been in the military service, the chairman found it desirable at this time to present a brief history of the work of the Council since its origin. Since that council was discontinued some years later, when its activities were turned over to a number of bureaus, it is well to read that summary:

> The Council on Health and Public Instruction was organized at St. Louis in 1910. During the reorganization period of the Association from 1902 to 1910 many independent committees had been created dealing with closely related subjects but without any coordination or definite division of functions or jurisdiction. At the 1909 session the Section on Hygiene and Sanitary Science asked the House of Delegates to create a permanent council on these subjects. The reference committee to which this request was referred called attention to the close relation existing between public education, medical and public health legislation and the development of hygiene and sanitation and recommended the appointment of a committee to consider the advisability of combining the functions of legislation, public instruction, organization and public sanitation in a permanent council. This committee was appointed and reported the following year, recommending the establishment of such a permanent council. The Council on Health and Public Instruction was accordingly created and appointed in June 1910 and held its first meeting and organized in July of the same year. In it were merged the old Committees on Medical Legislation, Public Instruction on Medical Subjects, Defense of Medical Research, Organization, Uniform Regulation of Membership, Visual Standards of Pilots, Public Health Education, Prevention of Blindness and Postgraduate Study. In 1911 the work of the Council consisted in the promotion of the work of Dr. J. N. McCormack, at that time engaged in organization work for the Association; in the development of a series of fifteen pamphlets on the Defense of Medical Research, which, in addition to thirteen already published, formed a standard series of twenty-eight monographs on this subject, and in the development of a bureau on medical legislation by which it was hoped some of the problems in this field could be solved and in studying the problem of public education by state boards and other agencies through popular pamphlets.
>
> At the next session, in 1912, the Council reported that a Press Bureau had been organized and conducted during the past year by which regular press bulletins had been sent to approximately 5,000 daily newspapers each week; the Speakers' Bureau had been organized and in the three months of its existence had supplied speakers for forty-four meetings; nine pamphlets on various public health subjects had been prepared, printed and distributed; a Handbook for Speakers on Public Health had been compiled, printed and distributed to the speakers of the Bureau. The Council also reported the organization, through cooperation with the National Electric Light Association and the American Institute of Electrical Engineers, of the Committee on Resuscitation after Electrical Shock; of the appointment, in cooperation with the National Education Association, of a Joint Committee on Medical Expert Testimony, consisting of representatives of the American Medical Associa-

tion, the American Bar Association and the Commissioners on Uniform Laws; of a Committee on Rural Sanitation consisting of representatives of the American Medical Association, the Association of Railway Surgeons and the Conference of State and Provincial Boards of Health; of a Committee on Vital Statistics Legislation consisting of representatives of the American Medical Association, the American Public Health Association, the American Bar Association, Commissioners on Uniform Laws and the Bureau of the Census. In addition the Council had done much work along legislative lines and had represented the Association in a campaign for the establishment of a national department of health.

In 1913 the Council reported the continuation of these activities, showing that speakers had been furnished for 213 meetings during the year; that fourteen pamphlets had been prepared and distributed, and that the various subcommittees of the Council had been functioning successfully during the year. A Committee on Resuscitation from Mine Gases, as the successor of the Committee on Resuscitation after Electrical Shock, had been created at the request of the Federal Bureau of Mines. These committees had standardized the methods of artificial respiration and the treatment of the drowned and those suffering from gas, electric shock, and so on.

In 1914, after four years of existence, the Council presented to the House of Delegates a definite program in which it endeavored to formulate the duties and activities of the organized medical profession in the public health field. In outlining such a program the Council assumed that the primary object of its existence was to place before the profession and the public of the United States the objects, purposes and work of the organized medical profession as represented by the American Medical Association and its constituent state and component county societies, so as to secure public support and endorsement of our efforts for the improvement of public health conditions in the United States. Three general lines of action were accordingly recommended. These were:

1. A thorough investigation of present public health conditions in the United States with the view to securing more accurate information on all phases of the public health problem than is now available.

2. Education of the public by every possible means in order that the people may understand the enormous advances in scientific medical knowledge during the last generation and the possibilities of utilizing such knowledge in the prevention of disease, the reduction of the death rate and the prolongation of human life.

3. The crystallizing of such educated sentiment in necessary public health laws which will render possible the conservation of human life commensurate with our advancing knowledge and will render such laws effective through the only force available in this country, namely educated and enlightened public opinion.

Under the first head, namely the investigation of the present public health situation, need for additional knowledge was subdivided into four classes: (*a*) public health activities of the federal government, (*b*) state public health activities, (*c*) municipal health organization and (*d*) voluntary public health organization.

Under the second head, the education of the public, the Council reported the continuation of the Press Bureau, forty-two bulletins having been sent to 4,900 newspapers at a total cost of approximately $2,300. The Speakers' Bureau had been maintained during the year, speakers had been furnished for 133 meetings at a total cost of approximately $1,900, and a standard set of public health pamphlets had been prepared and published for the use of state boards. In addition, a series of twenty pamphlets on Conservation of Vision had been prepared and issued by the subcommittee on this subject. This set of pamphlets has remained in use ever since and has been recognized as a standard in this field. A series of six pamphlets on cancer and its prevention had also been prepared and published. The total number of pamphlets issued during the year was 57,250.

In 1915 the Council reported the continuation of its program, particularly the carrying on of a comparative study of state public health activities by Dr. Charles V. Chapin, health commissioner of Providence, R. I., as the special representative of the Council. Dr. Chapin's report was the first effort to collect data on state health activities with a view to the ultimate standardization and classification of state public health work. Regarding voluntary public health activities, the Council endeavored through a conference of representatives of the various voluntary organizations held in New York on March 13, 1915 to coordinate the numerous organizations in this field. Along educational lines, the Council reported that, at the direction of the general manager, the mailing list of the Press Bulletin had been reduced to 2,200. Owing to the limited appropriation, the amount available for the Speakers' Bureau had been limited to $1,000. For this amount speakers had been furnished for 151 meetings, an average expense of $9.80 a meeting. During the year 285,400 pamphlets have been printed and distributed.

In 1916 the Council reported further development of its program, including the publication of Dr. Chapin's Report on State Public Health Work, with a rating sheet of the forty-eight state health organizations showing their comparative standing in different lines of state public health work, their appropriations, expenditures, etc. A preliminary edition of 1,000 copies of this report was distributed to members of state boards of health and officers of the Association for criticism and suggestions, and the Council expressed the hope that at the end of two or three years a second survey might be made for confirmatory and comparative purposes. Owing to reduced appropriations the Press Bulletin had been suspended, and the plan of the Speakers' Bureau had been modified by asking local organizations to pay the expenses of speakers instead of having these expenses borne by the Association. During the year 1,133,500 pamphlets had been printed and distributed. Cooperative work had been carried on through the Elizabeth McCormick Memorial Fund and the dry-goods stores of the country for child welfare.

Viewing the situation after the war, the Council thought it inadvisable to continue its press bureau and its speakers' bureau since those functions had been developed by other agencies. It proposed to continue the publication of useful pamphlets. It felt that the control of voluntary health organizations was a problem not for the Council but more particularly for the American Public Health Association, which had recently organized a council of representatives of fifty-seven different national public health organizations. It proposed, therefore, to limit its work largely to the routine work of the secretary's office, continuation of the section on legal medicine and medical legislation, and a survey of public health activities of national, state and municipal, governmental and voluntary agencies. The final section of the report, which was issued under Dr. Victor C. Vaughan as chairman, with Dr. Frederick R. Green as secretary, dealt with social insurance. This report reviewed the existing status of legislation in the field and expressed the point of view of the medical profession in positive terms:

> The attitude of the majority of physicians up to date has been one of unqualified and often unreasoning opposition, without any effort to study the question or to consider the arguments put forward in favor of the proposed plan. Unreasoning opposition or sweeping and often erroneous general arguments against the measure will not prevent its adoption nor will it enhance the influence of physicians. It is of the utmost importance to the medical profession at present that we give this question the most careful, painstaking, patient and disinterested study, that we qualify ourselves as authorities instead of allowing this function to be exercised by the active proponents of social

insurance. To this end it is particularly necessary that we study this question dispassionately and critically, discriminating between fundamental principles and nonessential details.

The Council recognized four possible solutions for the problem of illness among persons of low income: (1) increasing the income, (2) reducing the amount of sickness, (3) distributing the costs of sickness among the individual, the industry and the state, and (4) doing nothing. These were classed as the economic remedy, the state public health remedy, social insurance and no remedy at all.

It was recognized that extensive studies would be required from an economic point of view to answer many of the questions in the field concerned. The Council recommended that the House of Delegates give most careful study to the report of its subcommittee on social insurance.

The report of the subcommittee on social insurance leaned largely on statistics that were being developed by insurance companies and by the U. S. Public Health Service. It endeavored to assess the responsibility for sickness in its various proportions to the individual, the community and industry. It discussed the relationships between sickness and economic distress, quoting again largely from such writers as the Webbs, Edward T. Devine, Michael Davis and little at all from writers opposed to state controlled methods of medical care.

The final section of the report was an analysis of the relationship of the medical profession to the problems of social insurance.

The committee seemed to believe that a choice was necessarily between state medicine and health insurance. It recognized the evils prevailing in the plans of other countries and recommended that our medical profession learn from the difficulties that prevailed in England and Germany. It felt that the decision would rest not with the medical profession but with economic groups and forces outside the medical profession. Thus it said:

> Your committee does not deem that it is its duty to bring forward at this time a method thoroughly worked out in all detail of medical practice under any sickness insurance scheme. In its previous reports it has gone fully into the methods of payment of physicians under such acts. It has pointed out the mistakes made in the administration of medical service by the insurance laws abroad. It must further be emphasized that it is not a question for the decision of the medical profession whether or not these laws shall be put in force. That is a question for economic groups and forces outside of the medical profession. It will be decided when labor and industry agree together sufficiently to demand it of the legislative bodies of the various states. It is, however, of the utmost importance for the medical profession to be ready with constructive suggestions, to meet labor and industry halfway and show to them how the profession may give a greatly improved service to the wage earners and receive a just remuneration in return, and the great mass of unremunerative medical charity may cease to exist. It is also for the profession to decide whether or not it wishes to carry on its existence under some form of sickness insurance or under some method of state medicine. That choice must inevitably be made.

The conclusion was, however, simply a recommendation for further study and for appearance by physicians before all state legislatures having these questions before them so that the point of view of medicine could be adequately presented. This report was signed by four names: Drs. Alexander Lambert, M. L. Harris, F. L. Van Sickle and S. S. Goldwater.

MULTIPLE RESOLUTIONS

By this time it was apparent that so many actions were being taken in the organization and development of the Association that some codification was needed. A resolution was introduced requesting the secretary of the Association to collect all resolutions passed in the previous five years, to index them properly and to add new resolutions as they developed. The resolution was passed with simply an amendment that ten years be codified instead of five.

SOCIAL INSURANCE

The report on social insurance was referred to a reference committee which included Dr. Thomas S. Cullen, Maryland, as chairman, and Drs. Clarence Pierson, Louisiana, and Charles E. Humiston, Illinois. The committee recommended that every member of the House read the report in full. It recognized the stupendous character of the problem. It commended the committee on refraining from making any definite recommendations. Especially, however, it recognized the political character of the situation. It concluded its report by recommending a change in the By-Laws which would make the Reference Committee on Legislation and Political Action instead a Reference Committee on Legislation and Public Relations. The committee said:

> This change is deemed advisable at this time, as the term political action has in some quarters been thought to refer to politics. In the words of Confucius, "Avoid the very appearance of evil. Do not stoop to tie your shoes in your neighbor's melon patch."

SPECIALIZATION

At this session of the Association there suddenly arose a definite recognition of the rise of specialization versus general practice; a resolution was introduced that the House of Delegates encourage the designation of the practice of general medicine or family physician as a distinct and dignified specialty and that the Council on Medical Education consider the possibility of establishing a definite curriculum leading to the degree of practice of this specialty which would materially shorten the course. The House of Delegates referred these to the Council on Medical Education.

THE SPEAKER

When the elections came before the House of Delegates on the concluding day of the session, an unusual situation arose in the proposal of nomination of the speaker for the presidency. A number of the parliamentarians had studied the Constitution and By-Laws and voiced their opinions to the effect that the speaker was not a member of the House of Delegates and that he was therefore eligible. A motion was taken to the effect that the speaker be considered eligible and the motion passed. Then Admiral William C. Braisted of the U. S. Navy was nominated for the presidency and Dr. Hubert Work announced that he was not even a tentative candidate. Admiral Braisted was elected unanimously to the presidency of the Association.

A number of foreign guests had come to the meeting which had been declared a Victory Meeting for the Association. These included six from Belgium, eight from England, three from France, two from China, three from Japan, four from Cuba, one from Norway and one from Sweden. All were elected to Honorary Fellowship in the American Medical Association.

DAYLIGHT SAVING TIME

As the session ended, the Congress of the United States was proposing to repeal the Daylight Saving Act. The House of Delegates officially opposed the repeal of the act and expressed its opinion of daylight saving as follows:

> The national experience with the Daylight Saving Act during the past two years has shown in the opinion of the committee that the action of this bill has been wholly beneficial, not only has it added to the total of national health by lengthened hours of recreation in the open air, but it is the belief of the committee that notable economic savings have been made in the use of fuel, thereby materially assisting the conservation of national resources, which still is and always will be essential.

BOARD NEEDS MORE MEETINGS

By this time the multiple affairs of the Association had become so great that the Board of Trustees found it impossible to handle them in the amount of time allotted to its meetings. The Board had been accustomed to meet but twice each year—once in February and once at the time of the annual session. Most of the members of the Board were certain that there ought to be more frequent meetings, primarily because too much opposition was focusing itself on the editor and general manager and that it was unfair to put all the responsibility on the manager. It was felt that the Board of Trustees should meet quarterly and that there ought to be an executive committee which would meet regularly in order to take some of the burden from the editor and the general manager. When Dr. George S. Simmons was asked for his opinion, he pointed out that it was at his earnest suggestion that more frequent meetings of the Board were being held. He said that a Board of Trustees consisting of nine men in session once every three months would not do much toward relieving the general manager, or rather the editor, of responsibility; that it is not the general manager, but the editor, that is criticized. He stated that we have a journal second to none in the world, a journal that is a power in the field of medicine, and yet if the editor turns down a paper written by some influential man it has its effect; that what the manager—the editor—wants is some one to shoulder a little of the responsibility—of the blame. He mentioned that there is not as much criticism today as there was fifteen years ago but that there is bound to be some—that it may die down for a time but that it will spring up again. He urged the appointment of a committee of three, living within a reasonable distance of Chicago, to meet once a month—not once in three months—which should act on matters of importance that are coming up all the time and assume part of the editor's responsibility. He stated that it is the editor's position that should be supported.

As a result of these actions the board decided on a technic which would involve four meetings of the full board annually and the meetings of the executive committee once each month—a procedure which has been followed since that time.

DERMATOLOGY JOURNAL

Petitions now had come for a journal in the field of dermatology. For some time the *Journal of Cutaneous Diseases* had been printed in the headquarters office of the American Medical Association and it was felt that publication by the Association would solve many of its financial and editorial problems.

EXECUTIVE COMMITTEE

The first Executive Committee of the Board of Trustees included Drs. Frank Billings (chairman), W. T. Sarles and A. R. Mitchell.

Following the annual session in June of 1919 the Executive Committee met and assumed as its first responsibility advice to the editor relative to passing on papers which had been marked for publication in the Transactions only. THE JOURNAL had begun publishing abstracts from German medical periodicals and Dr. George W. Crile, in association with Drs. F. E. Bunts and W. E. Lower in Cleveland, were opposed to giving any recognition to Germans or German literature. There had been an extensive correspondence on the subject. Dr. Crile was adamant in refusing to countenance any relationships whatever with Germans or any recognition of their science. The Executive Committee of the Board of Trustees agreed with the editor that anything of real importance appearing in the German journals should be brought to the attention of the medical profession.

NEW EDITORIAL BOARDS

The Board of Trustees during this year established editorial boards for the ARCHIVES OF DERMATOLOGY AND SYPHILOLOGY and for the ARCHIVES OF SURGERY.

THE STERNBERG BIOGRAPHY

There was also the problem of printing the biography of General Sternberg, which had been written by Mrs. Sternberg, the costs to be offset by Mrs. Sternberg, and it was agreed to undertake this publication with the understanding that if there were any profits they would be divided equally with Mrs. Sternberg.

WAR BOOKS

At that time the American Medical Association endeavored to get distribution to the medical profession of books which had been printed during the war for the use of medical officers.

It was pointed out by Dr. Frank Billings that he had learned that there were no books on hand but that even if there were any they would be government property and could not be distributed. However, as the nation entered World War II some 8,000 copies of the anatomy prepared during World War I were found in a warehouse on Long Island.

The Ad Interim Committee which had been created during the war to consider emergencies arising during the war presented to the Board of Trustees of the Association an extensive letter from the President of the Association, Dr. Alexander Lambert, which he had received from Gen. Merritt W. Ireland concerning the possibility of deriving some lessons from the experience in the war. It was proposed that a circular letter be sent to all men who had been actually in service and some means be provided for continuing the instruction of men in the medical reserve. At that time Dr. Billings explained some of the problems confronting the medical department of the Army, including representation of the medical department on the general staff, control by the medical department of its own personnel, control by the medical department of supplies, building of hospitals and camps, recognition of the importance of sanitation and preventive medicine in the Army, military medical teaching and suitable recognition of qualifications of officers.

As the year went on there came a request from a group of obstetricians to take over the *American Journal of Obstetrics and Diseases of Women and Children*, but it was decided that the Association already had enough periodicals in hand.

(To be continued)

Clinical Notes, Suggestions and New Instruments

REACTIONS TO PENICILLIN

Procaine Hydrochloride Intravenously in the Treatment of Reactions Similar to Serum Sickness

SIDNEY DRESSLER, M.D.
and
RALPH E. DWORK, M.D.
Denver

Numerous reports have appeared in the literature of reactions similar to serum sickness and of other reactions to penicillin. These reactions have been variously treated with epinephrine, Benadryl hydrochloride (beta-dimethylaminoethyl benzohydryl ether hydrochloride), calcium gluconate, ephedrine and other preparations. Recently, State and Wangensteen[1] reported the use of procaine hydrochloride intravenously for actual serum sickness, and a similar case was cited by Appelbaum and others.[2] Prompted by these reports we are adding a case of successful treatment with procaine hydrochloride for a reaction similar to serum sickness resulting from penicillin therapy.

REPORT OF A CASE

E. B., a white woman aged 42, was admitted on June 17, 1946 with a history of pulmonary tuberculosis for the past ten years. She had previously been treated with artificial pneumothorax, which adequately controlled the disease. Reactivation of the tuberculous process caused her to seek readmission. Roentgenologic examination revealed a cavity in the upper lobe of the left lung, for which collapse therapy was advised. Reinstitution of pneumothorax having failed, a classic extrapleural paravertebral thoracoplasty was performed on the left side on Aug. 13, 1946. The patient was given 20,000 units of penicillin every three hours, intramuscularly, for three days prior to the operation, and the dosage was continued for seven days postoperatively. In the course of the surgical operation, 3 Gm. of sulfathiazole crystals was sprinkled into the wound. In the immediate postoperative period the patient received meperidine hydrochloride (Demerol) and morphine for pain, with occasional doses of barbiturate preparations for sleep and nervousness. On the second postoperative day some intestinal stasis with distention was noted. This was successfully combated by use of a rectal tube and by the injection of 1 cc. of neostigmine methylsulfate. Otherwise, the convalescence was uneventful.

On Sept. 9, 1946 a second stage three rib thoracoplasty was performed. Again 3 Gm. of sulfathiazole crystals was sprinkled into the wound. Penicillin therapy had been started three days before surgical intervention in the same dosage as previously, with no untoward changes noted. During the night after the operation the patient's temperature rose to 99.4 F., and giant urticarial wheals appeared on the face, arms and legs. Her medication up to this time had consisted of penicillin and meperidine. On Sept. 10 Benadryl was given twice in divided doses of 50 mg. each for the urticaria. This was followed by prompt relief of the itching and subsidence of the urticaria during the day. Penicillin therapy was maintained.

On the morning of Sept. 11 the patient complained of a sore throat, and the temperature rose to 100 F. Detailed inspection of the throat revealed no abnormality. By 1 p. m. the temperature had risen to 102 F., and a finely patterned macular rash appeared on the abdomen, on the buttocks and on both forearms and thighs. This rash faded on pressure. There was generalized pruritus. Benadryl, 100 mg., was administered with complete relief of the itching and with fading of the rash on the abdomen. The patient's temperature continued to rise, however, to 103 F. Examination of the blood at this time revealed 18,000 white blood cells, 92 per cent of which were polymorphonuclear leukocytes with a decided shift to the left. Administration of penicillin was discontinued.

By the morning of Sept. 12 her temperature was 103.4 F.; she had a sore throat and tenderness over both temporomandibular joints. The patient could not open her mouth and remarked on the generalized muscular and articular pain and tenderness. The rash previously described appeared again over the chest and abdomen, and in addition the arms and thighs showed small splinter hemorrhagic spots, which faded on pressure. There was no nuchal rigidity or Kernig or Brudzinski signs. Inspection of the wound revealed normal conditions. The mouth was opened forcibly, and the throat was inspected but was completely negative. The administration of Benadryl, 100 mg., again gave relief of itching and some fading of the rash on chest and abdomen but not of that on the forearms and thighs. The arthralgia and the soreness of the muscles were unrelieved. Calcium gluconate and epinephrine were given without effect.

At 1:30 p. m. an infusion of 1 Gm. of procaine hydrochloride in 500 cc. of isotonic solution of sodium chloride (0.2 per cent) was begun by the slow drip method. Within ten minutes after the start of the infusion there was great relief of the arthralgia and trismus, and the rash began to fade.

By 8 p. m. the rash had disappeared completely. The mouth could now be voluntarily opened sufficiently for inspection. The pain of the throat was no longer present. The temperature had dropped to 102.4 F. There was a moderate amount of abdominal distention present, which was relieved by use of the rectal tube and by the administration of 1 cc. of neostigmine methylsulfate. By morning neither arthralgia nor rash was present. The temperature had fallen to 101 F. The abdomen was considerably deflated. Within the next twenty-four hours the temperature returned to normal and the patient was symptom free; convalescence thereafter was uneventful.

Nine days after the second stage of the surgical intervention, cutaneous patch tests with penicillin were negative. Conjunctival instillations or subcutaneous skin tests were considered too dangerous to attempt.

COMMENT

During the latter part of the war, in spite of the extensive use of penicillin, there were only rare reports of any reactions to penicillin, but more recently reports have appeared of such reactions.[3]

Penicillin is used routinely in preoperative and postoperative therapy for patients requiring thoracoplasty. A number of urticarial reactions have appeared, but this is our first case of a reaction similar to serum sickness. Prompted by the striking results reported by others on the use of procaine hydrochloride to relieve the arthralgia, we used it in the case here described with gratifying results. As others have pointed out, the mode of action of this drug is highly conjectural.

The use of skin tests on our patient gave a negative result. Others have reported similar observations. Apparently, fairly large doses of penicillin, as high as 1,500 units, are required to give reliable results.

We are encouraged by the results obtained in this case to add it to the growing number of similar reactions which have been successfully treated and to call it to the attention of others.

From the National Jewish Hospital, Dr. Allan Hurst, Medical Director, and the University of Colorado School of Medicine.

1. State, D., and Wangensteen, O. H.: Procaine Intravenously in Treatment of Delayed Serum Sickness, J. A. M. A. **130:** 990 (April 13) 1946.

2. Appelbaum, E.; Abraham, A., and Sinton, W.: Serum Sickness Treated with Procaine Intravenously, J. A. M. A. **131:** 1274 (Aug. 17) 1946.

3. Cormia, F. E.; Jacobsen, L. Y., and Smith, E. L.: Reactions to Penicillin, Bull. U. S. Army M. Dept. **4:** 694 (Dec.) 1945. Strakosch, E. A.: Serum-Sickness-like Reactions to Penicillin, Rocky Mountain M. J. **43:** 558 (July) 1946. Kolodny, M. H., and Denhoff, E.: Reactions in Penicillin Therapy, J. A. M. A. **130:** 1058 (April 20) 1946. Strazza, J. A.: Delayed Sensitization to Penicillin Similar to Serum Sickness, ibid. **130:** 1071 (April 20) 1946.

Council on Pharmacy and Chemistry

REPORT OF THE COUNCIL

The Council has authorized publication of the following report.

AUSTIN SMITH, M.D., *Secretary.*

ANNUAL MEETING OF THE COUNCIL ON PHARMACY AND CHEMISTRY

The Council convened at 9:45 a. m., Nov. 1, 1946, for a meeting with the representatives of the American Pharmaceutical Manufacturers' Association and the American Drug Manufacturers' Association to discuss the new rules adopted by the Council. All members were present with the exception of Dr. David Barr.

The conference was characterized by a spirit of good will and cooperation sparked by a frank statement of the manufacturers' representatives on points of difficulty in application of the rules and other problems related to the Council. Full agreement was reached on all essential points, and the resulting modifications will be published in the near future.

The Council reconvened at 2:10 p. m. on Friday. All Council members present at the morning session were at this session. In addition there were present as guests for part or all of the meeting Dr. Charles E. Reed and Dr. Arno Viehoever of the Technical Industrial Intelligence Division of the Department of Commerce, Dr. E. E. Irons of the Board of Trustees, Dr. Donald Wallace of the Council on Dental Therapeutics of the American Dental Association, Dr. Ralph M. Waters and Dr. Windsor Cutting of the Therapeutic Trials Committee, Dr. E. Fullerton Cook of the Pharmacopeial Revision Committee, Dr. Milton Veldee of the National Institute of Health, and Dr. R. P. Fischelis of the American Pharmaceutical Association.

The first order of business was adoption of a motion that the Secretary of the Council be authorized to prepare a redrafting of the rules incorporating the changes agreed on at the morning meeting with the manufacturers' representatives. The Council then proceeded to the consideration of the prepared agendum.

Warnings on Labels of Prescribed Drugs.—The Council considered the fact that under the Food, Drug and Cosmetic Act pharmacists may be required to write or insert on the label of a prescribed article a warning concerning its danger even though the physician has not written such a warning on the prescription. After extensive discussion the Council voted to ask the Board of Trustees to make every effort through available channels to increase the sense of responsibility of physicians in the prescription and administration of drugs known to have inherent dangers for their patients. (The Board of Trustees has since requested a conference to be called by the Council with representatives from several agencies to determine how this sense of responsibility may be best developed.)

Human Plasma and Plasma.—After a considerable discussion of the postwar status of blood and blood derivatives, the consensus was that a definitive report is needed for the information of the medical profession and interested organizations. It was agreed that such a report be prepared under the Council's sponsorship for publication in THE JOURNAL. (Such a report is now under way.)

Products That May Be Advertised to the Public.—Under the Council's rules certain categories of products may be accepted for advertising to the public after special consideration of the specific preparation involved. The Council considered the feasibility of adding to this list and voted that such a list of additional categories be drawn up for Council consideration by an appropriate consultant or committee of consultants as to the desirability of releasing such classes of articles for lay advertising.

Report of the Therapeutic Trials Committee.—The Secretary of the Committee, Dr. Walton Van Winkle, reported that the Committee is now organized and has started work by way of obtaining information with regard to available clinical investigators and facilities. He discussed informally some projects which the Committee has tentatively considered. It was reported that Dr. Chester Keefer was elected and had consented to act as chairman and Dr. Stuart Mudd as vice chairman of the Committee.

Atomic Fission Products.—The Council considered the question of the need at the present moment for some body of semiofficial character, preferably, to be advisory to suitable governmental and commercial agencies on the distribution of radioactive isotopes and similar materials, both for experimental study and for actual use. After considerable discussion the Council voted that the Secretary be authorized to look into the circumstances surrounding this question and report on the possibility for the Council's advisory participation in this work.

Special Representation on the Council and the Therapeutic Trials Committee.—The Council considered a proposal that a representative or representatives of a specialized group of physicians be included in the membership of the Council. In the discussion of this question it was pointed out that the Council is a judicial rather than a representative body. In other words, it passes judgment on evidence offered for medicinal preparations proposed by manufacturers for inclusion in New and Nonofficial Remedies. In arriving at such judgment there has always been available to the Council the assistance of specialists in medical or other fields and the Council has always taken advantage of this fact. It was therefore the consensus that there is no necessity for having representatives of any particular group specialists as members of the Council.

Demerol Hydrochloride.—The Council considered the question of the addictive properties of this drug. It was pointed out that, in accepting the drug, the Council required the manufacturer to mention the possibility of addiction. The Council voted to study the problem further and to issue a report when further evidence becomes available.

Accepted Dosage Forms.—The attention of the Council was called to a letter received from a physician who pointed out that occasionally in prescribing a new drug, incorporating it as part of a prescription, he found it impossible for the pharmacist to fill it with the use of the drug in its bulk or powdered form, the agent being available only in tablets or perhaps capsules. The physician proposed that the Council amend its rules to require manufacturers to market the bulk form of an accepted drug as one of the dosage forms. It was pointed out that the Council does require, in the case of nonofficial mixtures, that the basic substance be presented and considered by the Council before acceptance of specific dosage forms. However, not every manufacturer makes the bulk drug available as a dosage form, and the Council felt that it was not feasible to make the requested arbitrary requirement concerning the actual marketed forms of accepted drugs, although it believed that manufacturers might be made aware of the dispensing problem where indicated.

Significance of the Council's Seal of Acceptance.—It has always been held that the use of the Council seal signified only that the product conforms to the rules set forth by the Council or that no conflict has been found with the rules. Consideration was given to the possibility that the use of the seal might be interpreted to have other significance. Further study of the question was authorized.

Medical Patents.—The Council's office as well as the other divisions of American Medical Association headquarters receives from time to time inquiries as to what the Association is doing concerning patents. The Council gave further consideration to the question in line with the Association's statement on medical ethics and with the report of the conference on medical patents of the Board of Trustees held March 16, 1939. No further report was authorized, but it was agreed that the Council should continue to give study to the question of medical patents.

Distribution of New and Nonofficial Remedies Copies to the American University of Beirut.—For many years the Council has supplied one class of each approved medical school paper bound copies of the current edition of New and Nonofficial Remedies. A petition was received from the University of Beirut, which is manned mainly by American teachers and by charter is a part of New York State University, to be included in this list. The Council was pleased to comply with the request and voted to send ninety copies of New and Nonofficial Reme-

dies (one for each junior and one for each senior medical student) and provided for sending forty-five copies annually hereafter.

The National Institute of Health.—Dr. Veldee, chief of the division of biologic control of the institute, who was present as a guest, explained to the Council how the National Institute of Health operates in its duties of controlling the safety, purity and potency of preparations that are made from viruses, antitoxins, antiserums and analogous products. It was remarked that such information would be of interest to all physicians, especially an explanation of the meaning of the statement that a product has been "approved" by the National Institute of Health. Broadening the discussion to include other governmental activities related to pharmaceuticals and pharmaceutic preparations, the Council voted that committee draw up a report for publication concerning the exact significance of the Pharmacopeia, the National Formulary, the National Institute of Health, the Food and Drug Administration and other related organizations or publications and that appropriate statements be included in Council publications.

U. S. Department of Commerce: Technical Industrial Intelligence Committee.—Drs. Reed and Viehoever of the department gave an interesting discussion of their work in the investigation of scientific (medical, chemical and pharmaceutic) information obtained from enemy countries. Drs. Reed and Viehoever asked that the Council cooperate in evaluating the reports on medicinal preparations prepared as a result of investigations of the Technical Industrial Intelligence Division. The Council voted heartily to cooperate in this matter.

Therapeutic Research Committee.—The chairman of the Committee reported that almost twice as much had been distributed to investigators in 1946 as had been awarded in 1945. He felt that the reasons for the difference are, first, that most clinical investigators were thoroughly preoccupied during the war with war contracts and other things and could not do very much of the type of work that this committee assists in; second, that the Committee has adopted a rather more liberal policy effective this year, looking to somewhat more continuous and somewhat larger support for the worth while projects.

High Potency Vitamin D Preparations.—The Council has been continuously interested in the therapeutic use of vitamin D and especially in the possible danger from the use of massive dosage. It has published a report rejecting two preparations promoted for the massive use of vitamin D in arthritis. Attention was called to current practice of using vitamin D dosage of the order of 300,000 and 500,000 units in the treatment of psoriasis and to the rapidly growing practice of the use of massive vitamin D dosages in the prevention of rickets. As a result of the discussion the Council voted to authorize preparation of a report dealing with the misuse of vitamin D in large doses and the hazardous effect of such practice.

NEW AND NONOFFICIAL REMEDIES

The following additional articles have been accepted as conforming to the rules of the Council on Pharmacy and Chemistry of the American Medical Association for admission to New and Nonofficial Remedies. A copy of the rules on which the Council bases its action will be sent on application.

AUSTIN SMITH, M.D., *Secretary.*

TABLETS BUFFERED PENICILLIN.—Tablets containing sodium or calcium penicillin and one or more buffering substances such as sodium citrate, aluminum dihydroxy amino acetate or aluminum hydroxide.

Actions and Uses.—Tablets buffered penicillin are intended for oral medication of the conditions for which penicillin has been found useful. Because of irregularities in absorption and because of destruction of much of the administered penicillin in the digestive tract, oral administration of penicillin should be preceded by administration of penicillin by the parenteral route. Tablets of penicillin should be used only after the infection is under control. Since gonorrhea responds rapidly to penicillin therapy, oral medication alone may be used in the absence of complications.

In order to achieve comparable blood concentrations of penicillin, from three to five times as much must be given orally as by the parenteral route. Gastric intolerance to the buffering agent may be encountered in some patients, necessitating abandonment of oral medication and a return to parenteral penicillin therapy.

Dosage.—Tablets buffered penicillin should be administered on a fasting stomach, not less than thirty minutes before or not less than one and one-half hours after eating.

Gonorrhea.—Combined Therapy: A single injection of 100,000 units followed not later than two or three hours by oral doses of 50,000 units each every two or three hours for six doses per day for one or two days.

Oral Therapy: Fifty thousand units every two or three hours for six doses per day for one or two days.

In complications such as arthritis, endocarditis and epididymitis, administer penicillin parenterally. Concurrent infections of gonorrhea and syphilis should always be considered. Treatment of gonorrhea under the foregoing dosage schedule may prevent the appearance of the chancre and thus mask the first evidence of syphilis. The masking of the chancre should not be construed as a beneficial effect. Blood serologic tests should be made once a month for a minimum of three months.

Pneumococcic, Streptococcic and Staphylococcic Infections.—A minimum of 20,000 to 40,000 units of penicillin parenterally every three hours. After the acute phase and when the temperature has been reduced, treatment may be continued with oral administration. Treat with a dosage of 40,000 to 50,000 units each two or three hours (day and night) for at least forty-eight hours after the temperature has returned to normal. If the condition is not controlled by oral penicillin, return to parenteral administration.

Prophylaxis.—Against secondary infections after tonsillectomy or tooth extraction in cases with a history of rheumatic fever or rheumatic heart disease, congenital heart disease and other conditions in which secondary infections may occur (infected teeth or tonsils), administer 100,000 to 200,000 units daily in divided doses from one day before to three or four days after surgery.

Precautions.—In meningitis, endocarditis and peritonitis, administer penicillin *only* parenterally. In acute infection with bacteremia or septicemia, parenteral administration of penicillin should be continued until the blood cultures become negative and the acute condition is controlled.

ABBOTT LABORATORIES, NORTH CHICAGO, ILL.

Tablets Penicillin Calcium: 50,000 units with sodium citrate 0.5 Gm. as a buffer.

BRISTOL LABORATORIES, INC., SYRACUSE, N. Y.

Tablets Penicillin Calcium: 50,000 units with calcium carbonate 0.5 Gm. as a buffer.

SCHENLEY LABORATORIES, INC., NEW YORK

Tablets Penicillin Calcium: 50,000 units with calcium carbonate 0.45 Gm. as a buffer.

E. R. SQUIBB & SONS, NEW YORK

Tablets Penicillin Calcium: 50,000 units with trisodium citrate 0.5 Gm. as a buffer.

PENICILLIN TROCHES.—Troches containing sodium or calcium penicillin.

Actions and Uses.—Penicillin Troches are designed to dissolve slowly in the mouth, releasing sufficient penicillin to maintain an antibacterial concentration of penicillin in the saliva. This medication has been found effective in controlling acute Vincent's infection of the mouth and pharynx. Chronic infections require additional manipulative therapy. Systemic infections should be treated by parenteral or oral administration of penicillin.

Dosage.—Allow one troche to dissolve in mouth two or three times daily.

ABBOTT LABORATORIES, NORTH CHICAGO, ILL.

Troches Penicillin Calcium: 1,000 units.

SCHENLEY LABORATORIES, INC., NEW YORK

Troches Penicillin Calcium: 1,000 units.

E. R. SQUIBB & SONS, NEW YORK

Chewing Troches Penicillin Calcium: 20,000 units.

THE UPJOHN COMPANY, KALAMAZOO, MICH.

Troches Penicillin Calcium: 500 units.

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

535 North Dearborn Street - - Chicago 10, Ill.

Cable Address . . . . "Medic, Chicago"

Subscription price . . . . . Eight dollars per annum in advance

Please send in promptly notice of change of address, giving both old and new; always state whether the change is temporary or permanent. Such notice should mention all journals received from this office. Important information regarding contributions will be found on second advertising page following reading matter.

SATURDAY, MARCH 22, 1947

DEATHS FOLLOWING THE USE OF "ANALBIS" SUPPOSITORIES

Recently the press and the radio have called attention to several deaths apparently due to Analbis Suppositories.

On Oct. 14, 1943 a new drug application was permitted to become effective for a suppository containing 135 mg. of the bismuth salt of diallylacetic acid dispersed in a cocoa butter base which was placed in commercial distribution by the Specific Pharmaceuticals, Inc., of New York City under the name Analbis Suppositories. Directions for use in children and adults were specific, and it was believed that the substance could be used under the conditions proposed and as directed. The preparation was recommended for pharyngitis, acute tonsillitis and gingivostomatitis. The successful use of bismuth preparations in the treatment of infections of the pharynx and adjacent structures had been reported by Lewis and by Silcox and Monteiro,[1] but injections were inconvenient and oral preparations of bismuth were either ineffective or produced undesirable gastrointestinal reactions. Rectal administration was shown to be effective and to have few undesirable effects.[2] None of the reports contained any indication that this preparation might produce untoward effects even when administered in animals or in human beings in amounts several times the recommended dose.

Deaths have been reported from several centers, including Texas, Norwalk, Conn., and New York City. At least 10 infants are reported to have died. Investigations by the Food and Drug Administration have revealed that none of the deaths can be attributed to bismuth poisoning, and it cannot be alleged at this time with certainty that the suppositories were responsible. However, in most instances investigated it was learned that from three to six times as many suppositories were used as were recommended by the manufacturer as the maximum dose. Diallylacetic acid may have been the cause of the deaths. At least the deaths are apparently due to an acute hepatitis and not to bismuth.

Whether the physician prescribed this overdosage or whether the parents of the patient undertook to exceed the physician's recommendation is not clear. Nevertheless, this tragedy again emphasizes the necessity for vigilance by physicians to prescribe properly, to be familiar with the properties and dosage of the drugs he uses, and to be cautious in prescribing new remedies about which only comparatively meager information is available.

Analbis Suppositories were voluntarily withdrawn from the market by the manufacturer after notification by the Food and Drug Administration of the deaths allegedly due to this preparation. The manufacturer submitted telegrams and letters to those who received shipments of the compound. Now the Food and Drug Administration with the cooperation of state and local authorities is attempting to secure the remaining suppositories. Physicians and pharmacists can cooperate by returning any unused suppositories to the manufacturer and warning patients for whom they have prescribed this medication to destroy or return the drug.

1. Lewis, J. F.: Vincent's Angina and Tonsillitis: Bismuth Treatment, J. Arkansas M. Soc. **38**: 39 (July) 1941. Silcox, L. N., and Monteiro, Aristides: Modern Treatment of Acute Tonsillitis by Injections of Bismuth Compounds, Arch. Otolaryng. **34**: 719 (Oct.) 1941. Lewis, J. F.: Fusospirochetal Organisms and Tonsillitis: Bismuth Therapy of Tonsillitis, Arch. Otolaryng. **35**: 587 (April) 1942.

2. Silber, Samuel: The Treatment of Tonsillitis, Pharyngitis and Gingivostomatitis with the Bismuth Salt of Heptadiene-Carboxylic Acid in Cocoa Butter Suppositories, J. Pediat. **23**: 59 (July) 1943. Stovin, J. S.: The Treatment of Acute Tonsillitis by Rectal Administration of a New Bismuth Compound, Arch. Otolaryng. **39**: 259 (March) 1944. Silber, Samuel: Bismuth Suppositories (Analbis) in Throat Infections: Bacteriology and Pharmacology; Effectiveness, Absorption, Excretion, Toxicity, J. Pediat. **25**: 244 (Sept.) 1944.

HUMAN TOXOPLASMOSIS

Toxoplasma has been known as a spontaneous infective agent for about ten years. In 1937 Wolf and Cowen [1] reported the presence of the infection in an infant born in New York who died at 4 weeks of age. Postmortem revealed widely disseminated inflammatory lesions of the brain and spinal cord. These were granulomas, areas of infiltration and necrosis, chiefly in the ventricular walls, and corresponding focal meningeal inflammation. Similar lesions were present in the retina and choroid of both eyes. An organism approximately 1.5 by 3 microns in size, usually ovoid and having a polar chromatin mass, was present in the lesions. The evidence indicated that the infection was congenital, probably a latent infection in the mother, which passed to the fetus by way of the placenta. The authors proposed that the disease be called granulomatous encephalomyelitis due to the organism Encephalitozoon hominis. Similar cases had been reported by Janku from Czechoslovakia, who observed inflammatory and degenerative changes in the eyes of a hydrocephalic infant and a parasite in the lesions, and by Torres of Rio de Janeiro, who reported a necropsy on a full term child that died at the age of 2 days; an intracellular

1. Wolf, Abner, and Cowen, David: Granulomatous Encephalomyelitis Due to an Encephalitozoon (Encephalitozoic Encephalomyelitis), Bull. Neurol. Inst. New York **6**: 306 (Aug.) 1937.

protozoon parasite was found in the central nervous system. Richter in 1936 had reported a similar case. Wolf, Cowen and Paige [2] reported next the disease in a white male infant delivered at full term by cesarean section who became ill at 3 days of age and died at the age of 31 days. Necropsy revealed a widespread encephalomyelitis with multiple focal areas of inflammation and necrosis and disseminated miliary granulomas. The right eye contained a localized zone of chorioretinitis. A protozoon parasite was present in the leptomeningeal and parenchymal exudate in the granulomas and in the lesions of the choroid and retina. The clinical and pathologic observations in this case were similar to those in the first 4 cases described in the literature. The authors concluded that this group formed a distinct disease entity, which affects young infants, produces manifestations of generalized involvement of the nervous system and terminates fatally after an acute or subacute course. The spinal fluid shows xanthochromia, high protein content and pleocytosis. Miliary granulomas are a characteristic feature of the process in the nervous system. A protozoon parasite is present in all the lesions. The results of transmission of the infection to animals from the case reported here indicate that the causative protozoon is a Toxoplasma. The designation Toxoplasma hominis is suggested for the micro-organism and toxoplasmic encephalomyelitis for the disease.

Pinkerton and Weinman [3] described the first authentic occurrence of toxoplasmosis in an adult. Pinkerton and Henderson [4] reported 2 fatalities from an acute, febrile, exanthematic disease in adults in St. Louis. Intracellular Toxoplasma organisms were found in the tissues in both these cases in such numbers as to leave no doubt concerning their etiologic significance. The clinical picture of the disease had almost nothing in common with that of the previously reported instances in infants. The disease entity closely simulates Rocky Mountain spotted fever and endemic typhus and has many features in common with certain of the recently described atypical pneumonias. Pathologically also the picture differs widely from that of the infantile type, the predominant feature being a peculiar type of interstitial pneumonitis. Meningoencephalitis, though present, is not conspicuous. The pathologic features common to the infantile and the adult type are focal brain lesions, myocarditis and the presence of Toxoplasma in the lesions. The disease was transmitted readily to guinea pigs by inoculation of blood taken from one of the patients during life and to mice by the intracranial inoculation of necropsy material from the same patient. Circumstantial evidence suggested that the disease may be transmitted by ticks. Sabin [5] reported in 1941 clinically atypical encephalitis occurring in boys 6 and 8 years of age during October 1939 and found definite evidence of the etiologic relationship of the protozoon parasite Toxoplasma in one and suggestive evidence in the other. One died thirty days after onset and the other recovered completely on the tenth day. Intracerebral and intra-abdominal inoculation of fresh brain suspension produced toxoplasmic infection in 5 of 8 mice which came from a stock that was proved to be free of spontaneous infection.

Sabin and his co-workers [6] developed a method of demonstrating neutralizing antibodies against Toxoplasma in the serum. Sabin demonstrated such antibodies not only in the serum of patients with toxoplasmosis but in that of their mothers and sometimes in that of other members of the family as well. Wolf, Cowen and Paige [7] inoculated into rabbits and mice infected material from the brain and spinal cord of an infant suffering from granulomatous encephalomyelitis and produced an experimental disease which was readily transmissible in series. A parasite identical with that in the lesions of the patients was found in the lesions of the experimental animals. The morphology of this micro-organism, the course of the disease, the lesions produced in the mammals inoculated with it and the results of cross immunity experiments establish its identity as a Toxoplasma. Zuelzer [8] reported 3 instances of infantile toxoplasmosis. Two of the patients represent the first instance of toxoplasmosis occurring in identical twins. The demonstration of the disease in twins and the presence of neutralizing antibodies in the maternal serum and the chronic character of most of the lesions observed in the twin who died of the disease at the age of 1 month constitute evidence for the occurrence of antepartum infections with Toxoplasma.

Callahan and his associates [9] report a study of a case of infantile toxoplasmic encephalomyelitis. They reviewed 10,000 necropsies recorded in the Department of Pathology, Washington University School of Medicine, and were able to find 5 cases of Toxoplasma infections which had not been previously recognized as such. These cases were listed under such diagnoses as chronic meningitis, syphilitic meningitis and encephalomalacia with calcification. Micro-organisms morphologically similar to Toxoplasma have been demonstrated in tissue sections in characteristic lesions in the central nervous system. The authors have collected and reviewed all the previously reported cases of toxoplas-

2. Wolf, Abner; Cowen, David, and Paige, Beryl H.: Toxoplasmic Encephalomyelitis: III, Am. J. Path. **15**: 657 (Nov.) 1939.
3. Pinkerton, Henry, and Weinman, David: Toxoplasma Infection in Man, Arch. Path. **30**: 374 (July) 1940.
4. Pinkerton, Henry, and Henderson, R. G.: Adult Toxoplasmosis, J. A. M. A. **116**: 807 (March 1) 1941.
5. Sabin, A. B.: Toxoplasmic Encephalitis in Children, J. A. M. A. **116**: 801 (March 1) 1941.
6. Sabin, A. B.: Toxoplasma Neutralizing Antibody in Human Beings and Morbid Conditions Associated with It, Proc. Soc. Exper. Biol. & Med. **51**: 6 (Oct.) 1942.
7. Wolf, Abner; Cowen, David, and Paige, Beryl H.: Toxoplasmic Encephalomyelitis: IV, J. Exper. Med. **71**: 187 (Feb.) 1940.
8. Zuelzer, W. W.: Infantile Toxoplasmosis, Arch. Path. **38**: 1 (July) 1944.
9. Callahan, W. P., Jr.; Russell, W. O., and Smith, Margaret G.: Human Toxoplasmosis, Medicine **25**: 343 (Dec.) 1946.

mosis. With regard to the incidence of the toxoplasmic infection, the authors feel that the studies of Sabin and Callahan suggest that this type of infection is more widespread than is generally realized. The serums of 59 of the 151 persons studied by Sabin had neutralizing substances for Toxoplasma, and positive reactors were found in a number of groups studied. In the group of infants and children tested, the incidence of neutralizing antibodies was found to be high only when certain clinical signs were present. With 1 exception, the infants who exhibited either chorioretinitis in the macular region or cerebral calcification or both in association with other signs and symptoms possessed neutralizing antibodies in their serum. The serums of 8 of the 10 mothers of these infants tested also revealed neutralizing antibodies. The pathologic changes within the gray matter of the cerebral cortex vary from small foci of cellular infiltration to large zones of necrosis with extensive destruction of brain substance. One of the consistent observations in the infantile type of toxoplasmosis is the presence of large foci of calcification within the zones of necrosis. Periventricular infiltration with lymphocytes and plasma cells with ulceration of the ependymal lining is frequently observed in infantile toxoplasmosis. This readily accounts for the internal hydrocephalus observed in infants with this disease. In contrast to the widespread destruction of the brain and spinal cord observed in infantile toxoplasmosis, the disease in adults and older children produces pathologic changes which are more manifest in other viscera with minimal lesions in the central nervous system. Eighty per cent of infants with toxoplasmic infection have internal hydrocephalus which is present at birth or appears shortly after. Frequent chorioretinal atrophy is present.

So far a specific therapeutic agent has not been found for toxoplasmic infection, although the administration of sulfapyridine may give beneficial results.

PHYSICAL EXAMINATIONS OF SELECTIVE SERVICE REGISTRANTS IN THE FINAL MONTHS OF THE WAR

The last years of the war were characterized chiefly by a growing need for men under 26 years of age to serve in the armed forces and an increasing scarcity of available manpower in this age group.[1] Hence it became necessary to restrict deferments in essential occupations, including agriculture, to reexamine many registrants who had formerly been rejected and to accept for military service some men who were unable to meet the physical requirements for general military service. As a result the rejection rates were higher during the final months of the war than during a period when the average age of examined men was less than 26 years.

During January 1944 through August 1945 the armed forces physically examined or reexamined some 5,767,000 registrants, of whom 2,536,800, or 44 per cent, were rejected for general military service. In addition, an estimated 1 to 2 per cent were rejected by local boards because of manifestly disqualifying defects.

Eighty-four per cent of the registrants physically examined during the last calendar year of hostilities were examined for the first time. These were chiefly men who registered with Selective Service at age 18 and men 19 to 25 years of age who had never been physically examined because they held deferments in essential occupations. A little less than 40 per cent (37.6) of this group were rejected on preliminary or preinduction examination.

The leading causes for all rejections during 1944—including local board rejections—were, in order of relative importance, mental disease, accounting for 26.8 per cent of all rejections; failure to meet the minimum intelligence standards, 12.8 per cent; musculoskeletal defects, 8.8 per cent; cardiovascular defects, 8.0 per cent; hernia, 4.9 per cent; ears, 4.4 per cent; neurologic disorders, 4.1 per cent; eye defects, 4.0 per cent; tuberculosis, 3.4 per cent, and mental deficiency, 2.6 per cent. These ten defects combined accounted for 80 per cent of all rejections during the year.

Tuberculosis, cardiovascular defects and musculoskeletal defects were of greater relative importance as causes for rejection among older men than among those under 26, who were more apt to be rejected because of mental and personality disorders.

Mental disease was the largest single cause for rejection in all the occupations except the two groups of laborers (farm and other). In these two groups mental deficiency and failure to meet the minimum intelligence standards caused the highest percentage of the rejections. Negroes are, of course, particularly concentrated in these groups.

Craftsmen and the professional and semiprofessional groups had a larger percentage of rejections for musculoskeletal and foot defects than did any other major occupations. Students had the highest percentage of rejections for cardiovascular defects; that for hernia was highest among service workers other than domestic and protective (barbers, beauticians, hospital attendants and others). The highest percentage of eye defects noted as cause for rejection was among students; tuberculosis and neurologic disorders each accounted for relatively more rejections of emergency workers and the unemployed than of any other group. Of the gainfully employed registrants, however, the highest percentage of tuberculosis rejections was among domestic and protective service workers.

These figures emphasize again the importance of the standards by which men are accepted or rejected in evaluating the general physical condition of any age group.

1. Medical Statistics Bulletin No. 4, National Headquarters, Selective Service System, Washington, D. C., June 1, 1946.

Current Comment

THE TAFT-SMITH-BALL-DONNELL BILL

Elsewhere in this issue appears a digest by the Bureau of Legal Medicine and Legislation of the Taft-Smith-Ball-Donnell national health bill. Physicians who read this carefully will realize that the principles set forth in this measure more nearly approximate the principles of the ten point national health program of the American Medical Association than any of the other health measures thus far proposed. It provides for a national health agency under medical direction; it provides for assembling health activities of the federal government in a single agency; it recognizes the principle of local responsibility and local control; scientifically it requires surveys to determine need before allocation of funds and does its utmost to avoid pauperization. Unusual is the inclusion of a special appropriation for prevention and control of cancer through the United States Public Health Service. The bill will be subject to hearings by the appropriate committees of the Senate and House of Representatives before final action is taken. Obviously complete approval will await the amended final text that usually evolves from the hearings.

STREPTOMYCIN FOR URINARY TRACT INFECTIONS

The results of a clinical study of streptomycin therapy of gonococcic urethritis, nonspecific urethritis, epididymitis and prostatitis have been reported by Pulaski.[1] The patients were resistant to treatment with the sulfonamides and penicillin. Symptoms of gonorrhea disappeared rapidly in 5 out of 9 patients following therapy with streptomycin without evident extension of infection to the prostate. In 2 or 3 patients whose prostates were enlarged the combination of prostatic massage and streptomycin eliminated the organisms. Treatment of 1 patient with prostatitis and 1 with urethritis and epididymitis failed. The usual amount of streptomycin administered was 0.5 Gm. dissolved in 5 cc. of isotonic solution of sodium chloride given intramuscularly every three hours for six days. Two patients with nongonococcic urethritis and 4 patients with nongonococcic urethritis and prostatitis were studied. The uncomplicated conditions responded readily to streptomycin and the patients have not shown signs of infection since. Four patients in whose infections prostatitis was a notable feature failed to be cured by streptomycin. Four paraplegic patients with indwelling catheters and epididymitis due to various organisms were also treated with streptomycin. In their infections streptomycin also failed, indicating, as with the prostatitis, that the drug did not find its way into the epididymis in sufficient concentrations to be effective. One patient with bilateral pelvic inflammatory disease was improved clinically but not cured by a ten day course of parenteral streptomycin therapy. These results suggest the need for further investigation of the use of streptomycin in the treatment of genitourinary infections.

1. Pulaski, Edwin J.: Streptomycin Therapy of Penicillin Resistant and Sulfonamide Resistant Specific and Nonspecific Urethritis, J. Ven. Dis. Inform. **28**: 1 (Jan.) 1947.

REVISION AND EXPANSION OF THE BIOLOGICS REGULATIONS

The first Biologics Law was enacted July 1, 1902. When the 78th Congress consolidated and revised the laws relating to the Public Health Service, the Biologics Law was included. This law now appears in part F of the Public Health Service Act of July 1, 1944. These changes have necessitated a revision of the Regulations which are required to be prepared for governing the manufacture and sale of biologic products and to insure the continued safety, purity and potency of the preparations. The Regulations were published in the *Federal Register* on Jan. 21, 1947 and became effective thirty days later. As is indicated in these regulations, the scope of the Biologics Law is broadened somewhat so that diagnostic biologic products, if administered or applied to a person or prepared from or with the aid of a biologic product, may now be distributed in interstate commerce only if prepared by a licensed laboratory. Included in these categories are blood grouping serums, Rh typing serums and allergenic diagnostics, in addition to a number of less widely distributed preparations. Information as to the status of any of these products or the requirements applicable to them may be obtained from the Biologics Control Laboratory, National Institute of Health, Bethesda 14, Md.

RESIDENCIES IN VETERANS' HOSPITALS

The forty-third Annual Congress on Medical Education and Licensure featured a round table symposium on the cooperative enterprise of the Veterans Administration and the medical schools in providing a high quality of medical care to veterans as well as residency training for physicians. Participating in the informal discussion were representatives of the Veterans Administration and the deans of schools in which the program has been developed furthest. This discussion, abstracted elsewhere in this issue, contains much useful information for those engaged in the project, especially medical schools just commencing the program. In the symposium answers were provided for such important questions as the authority to appoint or dismiss staff members and residents, the manner in which supplies and equipment may be secured with dispatch, research in veterans' hospitals, suggested internships, difficulties of geography and mechanisms for "trouble shooting." The whole program, the participants agreed, has vastly improved the medical care of veterans and must be made to work. Dr. Paul Magnuson, representing the Veterans Administration, stated that "the work being done by these medical schools under the direction of the deans' committees has been the greatest accomplishment to date in the relationships between government and private medicine."

ORGANIZATION SECTION

ANNUAL CONGRESS ON MEDICAL EDUCATION AND LICENSURE

Forty-Third Annual Meeting, Held in Chicago, Feb. 10, 1947

DR. HERMAN G. WEISKOTTEN, Syracuse, N. Y., Presiding

RESIDENCY PROGRAMS IN VETERANS' HOSPITALS

A ROUND TABLE DISCUSSION

PARTICIPANTS IN DISCUSSION

Moderator:

LOREN R. CHANDLER, M.D., San Francisco, Dean, Stanford University School of Medicine.

Discussers:

E. H. CUSHING, M.D., Washington, D. C., Chief of Educational Division, Veterans Administration.

HAROLD S. DIEHL, M.D., Minneapolis, Dean, University of Minnesota Medical School.

TINSLEY R. HARRISON, M.D., Dallas, Texas, Professor of Internal Medicine, Southwestern Medical College.

PAUL B. MAGNUSON, M.D., Washington, D. C., Acting Assistant Medical Director for Research and Education, Veterans Administration.

J. ROSCOE MILLER, M.D., Chicago, Dean, Northwestern University Medical School.

BURRELL O. RAULSTON, M.D., Los Angeles, Dean, University of Southern California School of Medicine.

ABSTRACT OF DISCUSSION

DR. CHANDLER: *Dr. Weiskotten and Members of the Congress:* This panel will discuss the resident training program in Veterans Administration hospitals. (Dr. Chandler then introduced the discussers.)

I think it is fair to state that every one in the medical profession, particularly those in medical schools, not only is interested in the present veterans' medical care program but is anxious to see it work. This program involves very intimate cooperation between the Veterans Administration, medical school faculties and hospital residents. This collaborative enterprise is now about a year old, so that it is appropriate to discuss at this time some of the problems faced by the faculties, deans' committees and the Veterans Administration. By way of introduction to the discussion, Dr. Magnuson will summarize progress to date.

DR. MAGNUSON: Undoubtedly most of you are familiar with the principles on which this program was started. It was established because we had to have good doctors and have them fast. We had millions of men returning from the services in addition to a considerable patient load from the previous war. Our hospitals were pretty well filled when men began to return from this war. There were three problems: first, the medical care of the veteran; second, the provision of training for physicians whose training was curtailed by the war; third, supplying of useful work and an income for young returning medical officers. It was impossible to secure competent full time men for the job. Furthermore, we felt we could get a better quality of men on a part time basis, so we appealed to the medical schools. There was not one single negative answer in reply to our request for cooperation. Within five months from the initiation of this training program there were fifty-seven medical schools collaborating with the veterans' hospitals. There are now some 1,400 to 1,500 residents in veterans' hospitals which are staffed by more than 1,500 part time men of instructor to professorial rank from the fifty-seven approved medical schools. The work being done by these medical schools under the direction of the deans' committees has been the greatest accomplishment to date in the relationships between government and medicine. So far the program has been free from political interference. When a Senator or Congressman or an influential citizen telephones, wanting one of his friends appointed to a hospital position, we simply say "Senator, we don't select the hospital staff. Physicians are recommended by the deans' committees to the manager of the hospital. They are appointed on that recommendation." In this way the hospitals are staffed for the most part by the medical schools, with only a skeleton staff of Veterans Administration men. The program is working unbelievably well despite the short time since it was started.

DR. CHANDLER: Dr. Miller, Northwestern was perhaps the first school in the project. How is it working?

DR. MILLER: We were the first group organized. We have been operating a little over a year now. We also are unique in that I think we have the largest hospital—Hines, with 3,500 beds. Northwestern and the University of Illinois are cooperating in the venture. We have divided the Hines services among the faculty of the two universities. At the present time we have about 144 residents in training. Our great difficulty is that of geography. The hospital is located some miles from the center of the city. It takes thirty to forty-five minutes of driving through traffic to get there, and a good deal longer on the common carriers. As a result, the hospital offers little to us as far as teaching or research is concerned, but we have been able, because of our large voluntary and partly paid faculty, to cover the services quite adequately.

DR. MAGNUSON: Dr. Chandler, I should like to emphasize that General Bradley and General Hawley promised, when I went to Washington, to build the new veterans' hospitals as close to medical schools as possible. I specified that, if possible, they should be sufficiently close so that they could be connected with the university hospital and medical school by tunnels. Dr. Miller is entirely correct about the distance between Hines and the two medical schools constituting a tremendous handicap. Fortunately, we now have the ground to build across the street from Passavant Hospital at Northwestern University and across the street from the University of Illinois hospital on the West side. These constructions have been approved and funds appropriated.

DR. DIEHL: At Minnesota our situation is a little different from that in Chicago. We were the second institution to organize a program in the veterans' hospital, commencing about two weeks after the program at Hines. We were fortunate in the location of the hospital. In Minneapolis the veterans' hospital, an 800 bed institution, is located about 7 miles from the medical school. It is readily accessible by a very easy drive of fifteen to twenty minutes, even though it is not just across the street. We started to select the staff a little over a year ago. Of the old medical staff of the hospital five have been retained. One of these is serving in an administrative capacity, two have been appointed as residents and two are serving as members of the professional staff. The latter two are professionally competent men who have since been appointed to the university faculty. The rest of the staff is completely new. At present the hospital staff consists of twenty-one consultants, seventeen of whom receive compensation from the Veterans Administration. Ordinarily these consultants make one visit a week. Some go to the veterans' hospital only on call. Con-

sultants are compensated at the rate of $50 for a half day at the hospital in almost all instances. In addition, there are thirty-seven attending physicians on the staff. These men are also certified by the boards. They spend a half day on each visit to the hospital. The majority of them make daily visits, although some make three visits a week, depending on what we think is best for the service. We have attempted to keep the appointment of full time men of the medical school faculty at the veterans' hospital to a minimum. There are now 107 residents on the staff. Eighty-four of those are on service in veterans' hospitals and the remainder are on services in affiliated hospitals. I think it is interesting to note what this program is doing to improve and extend medical service to veterans, which is the primary object of this whole program. A comparison of certain statistics for 1945 and 1946 in this hospital reveals that in 1945, when this hospital was operated by the old Veterans Administration staff, there were 4,750 admissions. In 1946, when it was operated under the new staff, even though part of the year was devoted to building the staff, there were 6,506 admissions, an increase of 1,756 patients. The bed capacity was unchanged. Thus, under the new program over 1,700 patients were given hospital care who, under the tempo of the old system, could not have been given assistance. This is an increase of 37 per cent. In spite of this increased admission rate the mortality rate has decreased 29 per cent. Those figures seem to be indicative of what this type of program can do to improve the medical care of veterans.

DR. MAGNUSON: Admission figures may be misleading. In many of our old Veterans Administration hospitals they ran what was called an admission ward, which was filled almost daily with people who might stay only two or three days. Furthermore, in some of our deans' committee operated hospitals the admissions have decreased because at least 50 per cent of the people who apply for admission are not admitted because they do not need hospitalization. In the old days they used to take everybody who applied.

DR. HARRISON: Our experience in Dallas is similar to the experiences cited. There is the difference that we have been concerned with two hospitals, one 10 miles south of us and one 30 miles to the north. In the last year we have developed services in both of those places. The geographic problem has been difficult but not insuperable. I think that every one finds that the care of veterans is improving wherever there are deans' committees' hospitals. Most of us feel that medical school training in the country, in general, is definitely superior to hospital training. Only a fraction of our graduates have been able to secure appointments in first rate hospitals. One of the tremendous advances resulting from these veterans' hospital programs is to strengthen that part of medical education which has been weakest, the Achilles heel of medical education. The kind of care the veterans will receive depends on the caliber of the staff. Building a good staff takes time. If we maintain high standards for residents, it takes longer to develop a residency program. If we maintain high standards for full time employees who are not appointed by the medical school but about whom we can make recommendations, it takes longer. But, as time goes on, it is becoming increasingly possible to recommend for full time positions a small skeleton staff of men who are of superior caliber. All of us who have been concerned with this in Dallas are extremely enthusiastic about this trend.

DR. MAGNUSON: Yes, every time I send a good man down from the central office to help a dean he steals the man, makes him chief of a service and puts him on the faculty.

DR. RAULSTON: In Los Angeles we started this program at the Sautelle and the Wadsworth Memorial hospitals on July 1, 1946. We have obtained the type of attending man we desired: men certified by a board, who were veterans and had appointments on the teaching faculties of one of the two medical schools. Ours is a joint project of the College of Medical Evangelists and the University of Southern California, operating with reasonably good feeling. Not only have we been able to obtain an adequate number of properly qualified attending physicians, but in some departments the demand for appointments is sometimes so great as to become embarrassing. Our hospital is located in a suburb of Los Angeles, and geography is not a serious problem. We have had excellent cooperation nearly always from the local veterans administration and certainly all the time from headquarters in Washington. We have been overwhelmed with applications for residencies, as is generally the case. We have about eighty residents in this hospital, with a potential capacity of about 2,000 beds and a present census of about 1,400 patients. Our first consideration is the care of the patients. Evidence of their satisfaction comes from innumerable letters, verbal statements and the great reduction in complaints from patients. The teaching program for the residents has been surprisingly good.

DR. CHANDLER: There is no question about support of the deans' committees at the Washington level. But there is considerable question regarding the full support of the program from the Bradley-Hawley-Magnuson level all the way down to the local managers. I should like to put this question: What should be the fundamental basis for cooperation between the Veterans Administration and the medical schools in order to operate this program successfully with university standards, Dr. Cushing?

DR. CUSHING: The central office turns over the teaching program entirely to the deans in the medical schools. We don't want to try to tell any one out in the field how to practice or teach medicine. We know that the deans are expert in teaching and practicing medicine throughout the country. We ask them to do likewise in the veterans' hospitals.

DR. DIEHL: I should like to comment on the question you put, Dr. Chandler. This project has been a unique and remarkable experience. We embarked on this extensive program a year ago with no formal agreement, blueprint or chart of procedure. Dr. Magnuson simply came to us and said "We want you to take over and run this hospital as you would a university hospital." Some deans have asked me "What sort of a contract do you have with the Veterans Administration?" We haven't any. The arrangement is entirely a matter of mutual confidence and common interest. There are advantages to the medical school in such a plan. We have no obligation to continue this program other than a moral one, which is all the Veterans Administration asks. They know we will continue with the project as long as high quality is maintained. We could not have asked for better support than we have had.

DR. MILLER: That is essentially our experience; we have had no trouble even at the local level. The educational policy of the hospital and the professional care of the patient are entirely in our hands. We have been fortunate in having managers sympathetic with the program and anxious to help, who have in no way hampered our program. Such difficulties as we have encountered have not been at the local or the Washington levels but in the intermediate echelons, although this has not been serious enough to constitute a great handicap.

DR. MAGNUSON: We must all realize what a tremendous expansion has occurred since July 1945 in the Veterans Administration, which is now taking care of a hundred thousand patients. Under these conditions it is absolutely impossible to secure a completely new staff immediately. We had a lot of men in the Veterans Administration who were trained over twenty years to say "No, it can't be done," instead of "Yes, we will do it." They must be reeducated or replaced. Our hospitals vary greatly, depending on the caliber of the personnel in the supply department and in administrative and professional posts. Some of these fellows cannot throw away the book and get things done as ordered by General Bradley, who insists that anything that is for the good of the patient can be justified. Despite everything, some of these old Veterans Adminstration men will still say "Well, that wasn't the way it has been done for the last twenty years. We have to get everybody's approval from here up to Washington and back again." The appropriate orders have all been issued, but to try to get the idea through some of the thick skulls is a very difficult job. You will have to hammer from your end and I promise you we will hammer

from ours; eventually we shall meet: the fellow in the middle is going to have a hell of a time.

DR. DIEHL: Whenever we have encountered difficulties we have done as Dr. Magnuson urges: "Don't write me a letter, telephone!" This formula has ironed out problems as rapidly as anybody could possibly hope.

DR. CHANDLER: The answer seems obvious: If all is not well, telephone Dr. Magnuson.

DR. CUSHING: We are often asked what fields of medicine are represented by our residencies. We don't have any service connected obstetrics or pediatrics at the present time. This includes pediatric orthopedics and gynecology except for occasional cases.

DR. CHANDLER: This touches on an important matter of policy: should the residency training programs in a given veterans' hospital be confined to those fields in which the training can be done entirely at that hospital?

DR. RAULSTON: We have two veterans' hospitals in Los Angeles. Apparently it is the policy of the Veterans Administration to develop certain residency services in one hospital more than in the other, so that the two may be supplementary We propose to rotate our residents from one of those hospitals to the other in order to improve the educational program. We find it exceedingly difficult to add affiliated services in other hospitals, because Los Angeles has very few teaching facilities in its private hospitals.

DR. DIEHL: We believe that there should be a free exchange and rotation of residents between the veterans' hospitals and our other teaching hospitals. In fact, our deans' committee would like to make some assignments to other hospitals for all residents in the veterans' hospital. Our orthopedic residents now go elsewhere for their experience with children and corrective orthopedics. Some of them will go to general hospitals for the traumatic type of surgery. Some of our residents at the veterans' hospital spend time at the University Hospital, at Minneapolis General Hospital and some at private hospitals where good surgical training is offered. In internal medicine there is a rotation program in which most if not all of the residents at the veterans' hospital have some work at the Minneapolis General Hospital.

DR. MILLER: The problem of affiliated services is much more difficult in Chicago for geographic reasons. Practically every service we offer is complete in the veterans' hospital except for the basic medical sciences and children's orthopedics.

DR. CUSHING: We have a rule that 50 per cent of the resident's time can be in outside hospitals. We prefer to have the men get their start in the Veterans Administration hospitals and obtain their outside training later. Many people have been asking about the duration of the appointment of the resident. It isn't necessarily a flat three year term. The deans' committees determine this. The committee periodically reviews the work of the residents; if they are good they can continue; if they are unsatisfactory they can be dismissed at any time.

DR. CHANDLER: Who has the authority to make such decisions?

DR. CUSHING: The central office or the Veterans Administration has nothing to do with it. The deans' committee is the group that is responsible for the training of the residents and they are the men that select the residents and decide when they should leave the service either because of unsatisfactory work or because they have completed their course of training.

DR. HARRISON: Regarding affiliated hospitals, much depends on the field of medicine involved. In some fields, such as psychiatry or orthopedics, it may be necessary to work at affiliated hospitals for a relatively long time. In other areas, such as general surgery and internal medicine, there is ample clinical material at the Veterans Administration hospitals to train the men. Regarding the work of the resident at the medical school, there should be a great deal of flexibility. For the rare few, research is better than a formal course. Other residents might better be assigned to some preclinical department.

DR. MAGNUSON: Laying out a formal course for men who are supposed to be educated and want to become specialists is perfectly asinine.

DR. CHANDLER: I want to be sure that we are clear on the question of duration of appointment of residents. Some of these appointees seem to think they have a bona fide guaranty of three years' residency training, win, lose or draw.

DR. MAGNUSON: You can terminate anybody's appointment in the Veterans Administration any time he doesn't do his job or isn't of service, and that goes for everybody. The residents can have their service discontinued at any time, even though the man may have started on a two year or three year program which was planned for him at the outset. Since the law definitely limits the training outside a veterans' hospital to 50 per cent of the time, it is a good deal better to assign men on a two year training program, for example, to do the first year of work in the veterans' hospital. To comment further on the problem of affiliated hospitals: Most residents can be trained within the Veterans Administration hospitals without going back and forth between those hospitals, the medical schools and other hospitals. It is well to keep him on service and give him his training within the veterans' hospital as far as possible.

DR. CUSHING: I wish to remind you that appointments to the attending staff, by law, are for one year, from the first of July to the last of the following June. However, the year's service can be arranged for the attending and consultant staff as the deans' committees desire. A man may be an attending physician every day for three months and then be off for three months, say. Or there may be an alternate day system. In any case, the termination of the appointment officially is on the thirtieth of June. Reappointments should be recommended by the deans well before that date each year.

DR. CHANDLER: Nearly everybody connected with the Veterans Administration hospital training program has asked about provisions for research by residents and staff. What is being done?

DR. MAGNUSON: We have the authority to provide funds directly from the central office to establish research laboratories in our hospitals, although the hospital concerned has to find the space in the first place, which is arranged locally. We have no money for new building construction for research. New construction is not acutely necessary because usually the hospital can find the required space. When that is found and the deans' committee plans a research laboratory with its equipment, specifying what is required and its cost, the expenditure can be authorized, so that the hospital can buy what is required. As regards additional research personnel, one or two technicians will suffice in most instances. The research problems that are contemplated should be described to us. When approved, they can be included in the hospital budget and be continued from year to year as seems justifiable. All new research problems must be referred to the Department of Research and Education to avoid our wasting funds on mental abortions labeled as research ideas. We cannot let anybody do whatever "research" strikes his fancy any more than you deans can in your medical schools. Each project must be approved and assigned necessary funds from the central office. Continuing financial support will be appropriated through the hospital management on its research fund from year to year. We expect to establish and support research laboratories in every veterans hospital associated with a medical school, under the provisions of the general budget.

DR. CHANDLER: How many veterans' hospitals are already engaged in research, or how many requests for approval of research projects are under consideration?

DR. MILLER: We have already found space at Hines for a rather adequate laboratory for research in clinical neurology, and considerable space has been earmarked for cancer research.

DR. DIEHL: As soon as our staff was organized and seemed to be meeting the clinical responsibilities, it desired to commence investigative work for the benefit of its patients and also of the residents. We were able to find some additional space in the

building and by setting up quonset huts arranged for space locally. Then we planned the installation of the scientific equipment necessary for research laboratories in medicine, surgery, clinical physiology, bacteriology and other subjects and submitted the program to Washington. Subsequently our veterans' hospital received a special grant of funds to provide these research laboratories; they are now being equipped.

DR. CHANDLER: About how long did it take after your request before you got the required authorization?

DR. DIEHL: Well, we submitted the request and wondered why nothing happened, for a time. Apparently the papers got lost along the line somewhere. So I telephoned Dr. Magnuson. Within twenty-four hours a telegram came to the local branch office authorizing the necessary expenditures.

DR. HARRISON: Because research opportunities will be available at veterans' hospitals, staff appointments may well become the most desirable full time associate professorship, particularly in medicine and surgery, that this country can offer. The salary scale is excellent, and other advantages are real. Therefore the selection of the staff should not be rushed too rapidly just because there is a job to be done. Let us go slowly and attract into these full time positions the best available medical talent.

DR. RAULSTON: I should like to report that we have research programs going on in both of our hospitals; they are progressing very nicely.

DR. DIEHL: The staff physicians at our hospital have been amazed at the interesting clinical material they encounter, not only from the point of view of clinical medicine, but from that of teaching and research. They do not deal with the dull, uninteresting patient anticipated by many.

DR. CHANDLER: Should we add interns to the veterans' hospitals?

DR. CUSHING: The law limits us to residents at the present time, but a change in legislation is under consideration to allow internships in Veterans Administration hospitals.

DR. MILLER: There is no reason why we could not start internships at any time at Hines. Our residency organization is well adapted for an internship program.

DR. RAULSTON: At the outset of this program Dr. Magnuson said he wanted these hospitals to be like university teaching hospitals. I don't know of any such hospitals that do not have interns.

DR. CHANDLER: A teaching hospital has medical students in clerkships, interns, residents, full time and part time attending teachers, research men, clinicians and directors. May we anticipate that veterans' hospitals will eventually encompass these activities and become true university teaching and medical care hospitals?

DR. MAGNUSON: Remember that we are starting a new program. It must prove its worth to the people of this country. The public must learn that the men in veterans' hospitals are not employed as guinea pigs. We have started with an educational program for residents, who are all veterans, who have been medical officers. They are all licensed to practice medicine. The law plainly states that doctors who take care of veterans must be licensed to practice medicine. In many states, licensure requires an internship. Some states do not. Rather than urge men to go to such states and take examinations on graduation from medical school to comply with the law, should we not seek to change the law after convincing the public that the veterans benefit from educational programs? It is significant that the American Legion Rehabilitation Committee has asked when we plan to start internships. It recognizes that all good hospitals have interns. Internships are on the way, but first we must change the existing law. As regards medical students serving as clinical clerks, I know of no law against it.

DR. DIEHL: This question of interns is interesting. Recently the dean of the medical school at the University of Manitoba and I discussed our program. He stated that they have an arrangement with the veterans' hospital in Winnipeg, which enables them to conduct not only graduate and intern training but also clinical clerkship teaching. He was sure the Veterans Administration in Canada would dislike changing this program. Veterans' hospitals can provide excellent internships. Of course, there are some limitations. A complete rotating internship would require affiliations with other hospitals. In any case the veterans and the public must be made to realize that an acceptable internship program improves the care of patients.

DR HARRISON: A hospital can attract better residents if there are interns. Residents are commonly recruited from the intern staff. Again, we shall obtain better interns if there are clinical clerks in the hospital. There is no question but that the caliber of men we attract to these residencies will be higher if we have interns and clinical clerks in the veterans' hospitals. Every day we encounter men who prefer residencies at civilian hospitals, despite a lower income, because there is teaching of interns and clinical clerks.

DR. CHANDLER: Apparently we may anticipate internships in due course of time, following on an amendment to the present law. What about medical libraries in the various hospitals?

DR. CUSHING: We are having considerable trouble with our medical libraries. I think the system is improving and we are gradually getting more books and journals into the hospitals. There is plenty of library money available. You need only write and request the books you want. There is money for binding and for duplicate copies of books. But you must order the books and journals from us.

DR. CHANDLER: What about supplies and equipment in veterans' hospitals, particularly in the laboratories? Are they adequate?

DR. HARRISON: That has been a difficulty because orders must go through a supply officer not directly concerned with medicine and surgery. A change is needed in this procedure.

DR. DIEHL: That has been our worst problem also. I judge that much depends on the local supply officers. Some really go out and get things. Others sit behind a desk and discover reasons for not getting things.

DR. CHANDLER: Speaking for Fort Miley in San Francisco, being jointly operated by the University of California and Stanford, this problem has been our big headache too.

DR. MAGNUSON: Supply and equipment have been the worst difficulty in the central office, and again I must remind you that it depends entirely on your local supply officer employing the existing machinery to get whatever you and the patient need at once. You should exert every pressure to get action. The deans' committees must demand what they need to treat patients. But be reasonable. Don't order fifty microscopes if twenty-five will do. As to drugs, laboratory equipment and the like, if the supply department does not have them, the supply officers have full authority to buy them on the open market. There is no reason for delay except inefficiency of a local supply officer. Everybody in the hospital is responsible to General Hawley. We are trying to convince these local administrators that their sole duty is to service the doctor so that he can serve the patient. As you know, the country is divided into thirteen districts, so that many problems should be handled locally. In the old days you had to telephone Washington to get permission to call in a consultant to take care of a patient who was acutely ill. A patient was most unfortunate if he became acutely ill on Friday afternoon after half-past 4, because he couldn't be taken care of until Monday at half-past 9.

DR. CHANDLER: We have been "on the air" for an hour and ten minutes. Perhaps we should sign off now, with this statement: the wisdom, integrity and sincerity of the efforts on behalf of this program at the Washington level warrant the whole-hearted support of all of us. This thing has got to work. Thank you.

NATIONAL CONFERENCE ON RURAL HEALTH

Second Annual Meeting, Palmer House, Chicago, Feb. 7 and 8, 1947

DR. F. S. CROCKETT, Lafayette, Ind., Presiding

(Concluded from page 785)

SATURDAY, FEBRUARY 8

Hospital Facilities and Health Centers for Rural Areas

MR. GRAHAM L. DAVIS, Director, Division of Hospitals, W. K. Kellogg Foundation, Battle Creek, Mich.; Member Advisory Board, Federal Hospital Council: This Michigan project in a way grew out of the activities of the W. K. Kellogg Foundation. Its large interest for the past seventeen years has been a seven county rural health project in southwestern Michigan. The foundation believes that its resources can be used to best advantage in applying knowledge rather than in research or relief activities. So we have tried to find out what the rural health and welfare problems are in those seven counties, and that activity has been expanded to all of the state of Michigan. We are inclined to believe, based on our experiences there, that the large weakness in rural hospital and health service is the absence of good diagnostic facilities and services. In other words, to treat a patient successfully you must find out what's the matter with him; and the modern doctor uses the x-rays and the laboratory to find out.

This Michigan hospital study was made by the Commission on Hospital Care as a pertinent study that other states might use in making similar studies and, as you know, now every state in the country is making a hospital study to comply with the requirements of Public Law 725, the Hospital Survey and Construction Act. The Michigan study has been published and widely distributed. The most interesting thing about the Michigan study was that the group of thirty-five persons the government selected to cooperate with the Commission on Hospital Care made a recommendation that the 292 general and allied special hospitals that we have in Michigan should be reduced in number to 110 located in seventy-one hospital areas.

The basic principle followed in defining these seventy-one hospital areas was that you shouldn't build a hospital where the need was for less than 50 beds. You cannot profitably use the services of a minimum of technical personnel needed when you have less than 50 beds averaging say 30 patients a day. A population of some 15,000 is necessary to support such a hospital. We also decided there should be hospital facilities within 30 miles of everybody in Michigan. When you get up here, you don't have 15,000 within a radius of 30 miles, so we had to compromise on a small unit; but the recommendation is that it must be supplied as a branch of the nearest large hospital.

The American College of Surgeons doesn't survey hospitals with less than 25 beds. It approves only 47 per cent of the hospitals with from 25 to 50 beds, but 93 per cent of hospitals with 100 or more beds.

The major weakness in rural medical service and hospital care is shown by the top half of Michigan. There are about half a million people there. North of that line there is only one radiologist, and there are no pathologists. The foundation located the first pathologist in the north peninsula at Marquette on the 1st of August. The major purpose of our program is to improve the quality of service in that area. There is one doctor 65 years old to take care of 10,000 people. At St. Ignace there is no hospital, there are 7 or 8 thousand people, one doctor over 80, and two osteopaths. Three of these hospital areas have no hospitals, and it seems that those three areas should come first. Rogers City, St. Ignace and L'Anse are the three. In fourteen other rural areas, ranging in population from 15 to 35 or 40 thousand, the hospital is an old house or similar structure. Under the act, preference must be given to rural areas. The 32 million dollars to be spent in the next five years in Michigan under this plan will take care of about one third of Michigan's needs for adequate hospital facilities. We need to spend about 90 million dollars to modernize and enlarge Michigan's total hospital facilities.

The major recommendation in this Michigan report is that the general hospital should be the focal point around which you develop the community health service, in addition to its traditional functions. In this integrated system we add 181 so-called public health and medical service centers. In most instances they need not have beds at all, and they would operate as branches of the general hospital. These units would have the office of the public health nurse in the community, two or three doctors in this town of a thousand people, a certain amount of diagnostic facilities, the dentist's office might be there, and so on. In some of these more thinly settled areas it is 25 or 30 miles to the nearest hospital, and we anticipate that there should be beds for normal obstetrics and perhaps emergency cases and certain types of medical cases that the general practitioner in those communities could treat.

Report of Committee on Hospital Facilities and Health Centers

DR. ALLEN T. STEWART: The problem was divided by the committee under three general topics: 1. Is there a need for improved medical care in rural areas? 2. What is being done now toward improving that condition? 3. What further is there to do? First the committee debated the definition of the terms "community clinic," "public health center," "hospital" and "medical center." We recommend that the definition of these terms be clarified.

Dr. A. C. Bachmeyer, in discussing the first topic, said that, according to a 1940 census, from between 19 and 20 million people lived in the open country. In over 11,171 of these communities having less than 1,000 population there were only 151 hospitals, 85 per cent of which had less than 50 beds. In the open country outside of all villages there were only 90 hospitals in the United States. Over 50 per cent of these hospitals had less than a 50 bed capacity, and most were special type institutions.

Next was the question What is being done toward improving the condition? and Dr. A. B. Wilson of the Public Health Service was called on to explain the Hill-Burton bill, or Public Law 725. Dr. Wilson stated that before any funds are made available each state must evolve a long range plan based on its needs as ascertained by survey and have the plan approved by the Surgeon General. Mrs. Weagly informed the committee that Senator Taft had told her that under the terms of the bill such an approved community project would receive federal assistance to the amount of one third of the cost of construction and equipment, not including the cost of the site.

The third point concerns the establishment of interested farm groups. The committee believes that these needs can be handled in the execution of the following four point program: 1. Actual formation of individual state plans now being made, so that federal appropriations may be secured. 2. A campaign to educate the population in regard to the medical situation in rural areas. 3. Community action. 4. Cooperation among community groups with the state plan.

Under community action falls the establishment of facilities for providing medical care. Even though 20 million people live in small towns and villages, it need not be assumed that all of these small towns must have hospitals. The danger to avoid is building a hospital that cannot be adequately supported and which therefore cannot render a high quality of service. Before any rural community builds a hospital, a careful study should be made. Hospitals should be constructed only where the size of the population, the availability of technical personnel, transportation and topographic factors and methods of financing justify the establishment and indicate continuous successful operation of such facilities. In this manner the medical profession would be brought into outlying districts on a consultation basis, the practitioner would have access to hospital facilities and the medical profession would exercise control over the quality of medical care in that area. These three points just discussed depend for their success on the fourth, the cooperation among community groups with the state plan.

ALLEN T. STEWART, M.D., Chairman.
MRS. ROY C. WEAGLY, Co-Chairman.
A. C. BACHMEYER, M.D.
MRS. JEROME EVANSON.
MRS. J. LANING TAYLOR.

COMMITTEE.

DISCUSSION

DR. CARL F. VOHS, St. Louis: We shouldn't lose sight of the long range program of hospital construction. Some facilities for the care of the aged, from the standpoint of medical care and custodial care, must play an important role in the development of our facilities. From the standpoint of prepayment medical plans I think that the hospitals must create some facilities that are cheaper than the $10,000 program that is being planned.

ER. ERNEST E. SHAW, Indianola, Iowa: We need to know just why no hospital with less than 50 beds is important. I practice in a town of 5,000 and I have a collaborator who practices in one of 1,200 and he says I'm not a rural practitioner. I have seen a good many small hospitals which are very well run. I feel there is a place for a hospital of less than 50 beds. We have a group in the northern part of the state with a radiologist and a pathologist. Those men go out one day a week to five surrounding towns and spend a day. They also go out on emergency cases. Those hospitals of 20 beds are doing a bang-up job, that is, good pathology services; and it would be a shame to try to make a 50 bed hospital there. I believe in all those things being done, but 85 to 90 per cent of our patients can be taken care of any place where they have a bed. We get along very well. We can have good medical service at a cost much less than that required for these hospitals.

DR. ROY WOOLSEY, Salt Lake City: Yesterday I advanced an idea that is coming from the industrial commission in Utah. Because of the location of mines away from Salt Lake City and Ogden, where the only large hospitals in the state are located, the practice has been for a long time in mining communities and in small farming communities of moving patients into the large hospitals. From that I develop the thought that in these 10 and 15 bed hospitals if there were patients who required specialists how much simpler and more convenient for the patient and the family to send the specialists to the small hospital. Let him go out and do the surgery and keep the people at home. I went 150 miles one afternoon and the next morning did some work in a very small hospital. The three doctors in this area cooperated. One gave the anesthetic, another assisted, and the other one looked after the general work in the community while the rest were tied up. We had three major pelvic operations during the morning. I came back that evening and the patient stayed at home. In fracture cases it is reasonably easy to have an orthopedist go out and have the work done in a small hospital. It's a thought that I think is worth considering.

DR. GRAHAM L. DAVIS, Michigan: I want to say that as a member of the Federal Hospital Council, which has had under consideration Public Law 725 and the discussion of the regulations under which that law must be administered, this issue of the minimum size of the hospital was carefully considered by the council at its meetings. The Federal Hospital Council includes those familiar with hospitals and those familiar with community needs and the proposal which had been made that no hospital be approved for a fund unless it had 50 beds was definitely not approved by the Federal Hospital Council; and the regulations which have been approved by the Surgeon General, by the Federal Security Administrator, and which will now be disseminated do not require that a hospital of less than 50 beds be not approved.

Committee on Methods of Bringing and Holding Physicians and Dentists in Rural Areas

DR. H. B. MULHOLLAND, Charlottesville, Va.: As a result of discussions yesterday and deliberations of the leaders of the panel last night we recommend: 1. The development of state and county health councils composed of representatives of the medical, dental, farm and other organizations concerned with the rural problem. We urge that these councils study the health needs and develop plans and programs for improvement of rural health in each particular area. 2. The development of adequate health facilities in rural areas where a competent survey has shown that these facilities are needed. We recognize that in order to attract and retain physicians and dentists certain fundamentals seem necessary: (*a*) provision of adequate medical facilities; (*b*) provision of a reasonable income for physicians and dentists in these areas; (*c*) stimulation of practice in groups; (*d*) a concomitant improvement of community educational and cultural facilities; (*e*) extension of good roads and the development of community understanding of its responsibilities with reference to all health matters. We also recognize that this whole problem is intimately tied in with the whole social and economic inadequacies in rural areas and the maintenance of a reasonable and stable income of rural people is the underlying factor in the achievement of these objectives. 3. The development through provision of funds in the various states of a program of medical and dental care, and this program should be best supplemented by a sound program of health education in the schools. 4. That the medical schools place more emphasis on the economic problems of medicine in the medical school curriculum. We suggest that medical students have practical experience in rural medicine in some point in their undergraduate courses. In our opinion a successful rural medical organization should include rotation of some interns through a coordinated hospital system including perhaps health centers.

J. S. JONES, Chairman.
NED BURLESON, M.D.
FRANK SMITH.
L. W. MORREY, D.D.S.
H. B. MULHOLLAND, M.D., Co-Chairman.
COMMITTEE.

DISCUSSION

J. S. JONES, Minnesota: I rise to amplify the first recommendation, that is, the meetings in the communities, in the counties or parishes, whatever they may be, of a joint group of the professional people involved and leaders of the rural organizations in order that this program may become effective. After we go from this conference we shall be in the same place we were when we arrived unless we do something. This should be multiplied out in every community; and we believe this first recommendation will be carried out by all the people here.

MR. ALBERT S. GOSS, Master, National Grange, Washington, D. C.: We would endorse everything in the report, but I'd like to call attention to one thing. The recommendation was made for the state and county councils. These will bring our program into a working position, but I do not believe that these state and county councils will happen unless there is some leadership nationally. We should also have a national council made up of the American Medical Association, the farm organizations, the Parent-Teachers Associations and people particularly interested in rural health. It is difficult to create a council here. This group has no authority. It seems to me that a practical approach would be for the group to request the Board of Trustees of the American Medical Association to work with the leaders of the farm and other interested groups and organize a national council which could keep in touch with the development in the states and do other things at the national level to promote the worth while projects outlined in this report.

MRS. ROY C. WEAGLEY, Maryland: As a representative of the American Farm Federation, I should like to second the suggestion made by Mr. Goss.

MR. WILLIAM G. MATHER, Pennsylvania: As a rural sociologist, I wish to emphasize that in the organization of these councils and in the planning for the location of hospitals and health facilties it should be remembered that the county is only a political unit. The farmers do not have loyalties to counties. Farmers live in communities. If this program is to be activated, it will have to reach into the community as a community. There is a loyalty there that can be capitalized on. If that loyalty is arbitrarily disregarded by following county or township lines there is an opposition that will also be encountered. I urge you to go with the psychology of the farmer rather than against it.

DR. D. G. MILLER JR., Morgantown, Ky.: One point that has a great deal of bearing on bringing rural physicians and

dentists into the community is to have a community where a doctor's wife is satisfied to live. I made ten attempts before being able to convince a young man and his wife that they could be happy in a town of a thousand population. Rural people adopt new ideas and new persons slowly, and you must live in a community two or three years before they are willing to accept you as one of them and follow your leadership in anything.

Lloyd C. Halvorson, Washington, D. C.: I didn't notice any mention of scholarships for rural students who might want to practice in rural communities. That is something that needs to be considered.

Eleanor Palmquist, R.N., Mississippi: We have done exactly that as far as the medical student is concerned. He has to sign a contract that he will come back to that community and practice a minimum of two and preferably five years. We make loans to a maximum of $5,000 to medical students when they come back to a rural community and practice. He cancels the entire indebtedness to the state if he practices five years.

Report of Committee on Voluntary Medical Prepayment Plans

Dr. James F. Doughty, Tracy, Calif.: As a result of the round table discussion the committee wishes to present the following recommendations:

1. Development of voluntary nonprofit prepayment medical and hospital care plans should be extended on a statewide basis, and such plans should meet the standards set up by the Council on Medical Service of the American Medical Association.

2. Prepayment medical plans should put on an educational campaign to increase preventive medical care and to encourage the development of local public health districts.

3. The enrolment policy should be as broad as possible but actuarially sound.

4. The need for facilities should be studied and provided for by local, state and federal funds as they are developed.

5. To meet the demand of the facilities developed, adequate personnel must be produced.

6. We recommend that provision be made in medical schools and hospital staffs for the training of general practitioners and that local plans be developed to encourage their residence and practice in rural communities.

7. Farm organizations and prepayment medical and hospital care plans should give more study to the development of methods for the sharing of costs for the care of the medically needy.

8. It is recommended that voluntary nonprofit prepayment medical care plans be developed on a statewide basis predicated on local needs, and we base this recommendation on the experience in some eighty-five medical society sponsored plans and some eighty-seven Blue Cross plans throughout the country.

We urge that copies of these recommendations be presented to the Council on Medical Service of the American Medical Association and to the farm organizations for further action.

J. Frank Doughty, M.D., Chairman.
Mrs. Paul Palmer, Co-Chairman.
Carl F. Vohs, M.D.
W. E. Garnett, Ph.D.
Joseph W. Fichter.

Committee.

DISCUSSION

Mr. Graham L. Davis, Michigan: In the last few years laws have been passed in a number of our states which impose restrictions on the freedom to organize voluntary nonprofit prepayment plans. A typical law similar in form to laws which now exist in some ten states requires that the organization of such plans must have the official approval of the state medical society. In a number of states the law provides that the plan cannot operate in any county unless at least 51 per cent of the physicians of the county approve the plan. The earliest law was in New Jersey. Others were passed in 1945 following a similar pattern. Irrespective of the motivation, these laws will have the effect of restricting the initiative of state or local groups to organize voluntary prepayment plans for themselves; and I think that the excellent effort of the American Medical Association in bringing this group together and in the endeavor to win cooperation between farm groups and organized medicine will not be promoted but will be put at a disadvantage by the establishment and continuance of such restrictions. If we are going to have voluntary nonprofit prepayment plans, let us have the broadest possible experimentation. I am not implying that initiative on the part of the people should not be accompanied by every effort to win and move forward with the cooperation of their physicians. Obviously, that is necessary; but a law that places control in the hands only of physicians of the money which is paid by the people for the benefit of those people and which is spent mostly on the physicians themselves is not a wise kind of law.

Dr. Norman M. Scott, Trenton, N. J.: The law in New Jersey, which was the first of its kind, was not instigated by the medical societies in New Jersey. The medical societies of New Jersey simply expressed an interest in trying to solve this problem in their own way. That's what we wanted to do; and when we attempted to do it the Commissioner of Banking and Insurance and the Attorney General said "You will have to have an enabling act because this is probably insurance. If it is insurance and you start to operate or if we consider it this and you start to operate, we'll bring an injunction against you and take it into court. If the court rules that it is insurance, you come under our domination and we write the enabling act. If the court rules it is not insurance, we will introduce a law into the legislature making it insurance." The medical society did not write the act. It was written by the state authorities to allow the medical profession to attempt to solve this problem in its own way as an effort of organized medicine. These acts may all be proved to be unconstitutional. If they are, they are discounted and we operate under the law covering nonprofit organizations. The decision of the state authorities was that it would require an enabling act and they wrote it. That's the background on that act.

Dr. B. J. Branton, Willmar, Minn.: In Minnesota we have an enabling act which covers all the various essential things. It says we must have a nonprofit prepayment medical plan under the enabling act. That word nonprofit to me means considerable. In our state association we spent a year and a half deciding what to do. We came out with two plans. The first plan was the one which would be nonprofit and therefore nontaxable in Minnesota. The second plan, which we are working on now, is to take all commercial insurance companies and bring out from them the finest contract which it is possible to get. We worked diligently on this. Many of us on that committee felt that a group that put on this sort of thing should be men of vision and know what it was all about. We have too many nonprofit voluntary and therefore nontaxable institutions in Minnesota. We have two ways of solving this in Minnesota. The first one is by taking cognizance of the fact that the Blue Cross has done beautiful work and by using the organization to help us in the carrying on of this business. Another way of going in this is by using facilities already available to the people of the state in buying voluntary prepayment medical and hospital care through the insurance carriers who are already in their field and paying their money to take care of the tax which we have to pay in the state of Minnesota. It seems that certain of the nonprofit organizations feel that they do not come under the insurance commissioner of the states in which they propose to operate. To carry on on an insurance level successfully, we should come under the insurance commission. I would say that in the states where it is necessary to have nonprofit, nontaxable prepayment plans, let them have it; but where it is not necessary, it shouldn't be. I believe that that word nonprofit should be deleted from this recommendation.

Dr. R. W. Fouts, Omaha: I had hoped that Drs. Scott or Branton might have said something in defense of the medical profession in connection with the recommendation of Mr. Davis.

If I understood correctly, the inference was that the medical profession who must deliver all of this medical service was standing in the way of the initiative the laymen and rural organizations might take in organizing prepayment medical insurance plans because we who must deliver this service insist that it be delivered under conditions that are satisfactory to the ethics and traditions of our profession. We have had in some parts of our country some experiences, and some of them are not ironed out yet so far as the Blue Cross plans are concerned or some of the medical services that they started out to render because of the fact that these Blue Cross plans are administered by laymen, and particularly hospital men who quite naturally will act to extend the scope of hospital activities in many instances to the point where it becomes the practice of medicine. That might easily happen to any medical service plan that might become dominated by hospital administrators or lay people who do not have the medical point of view. There is a reason why the medical profession insists that all medical plans receive the approval of the majority of physicians of that particular locality before they can receive the stamp of approval of the Council on Medical Service of the American Medical Association.

MR. JOSEPH W. FICHTER, Ohio State Grange, Columbus, Ohio: I share the sentiments of every one who has spoken from the farm groups that we feel that the American Medical Association has done a most constructive thing in inviting the farm organization representatives to participate in this conference and to represent a move that will bear fruit in a constructive way if similar meetings are held on a state or county level. However, I think the value of this kind of thing lies in the possibility that every one concerned can feel that the other fellow is approaching it with an open mind. If I were to have the temerity to make a suggestion about a conference of this kind, it would be this. If they are called on a state or local level, the medical profession should be not too much concerned about getting the farm groups or anybody to agree for the moment with what the medical profession thinks ought to be done. All of us are a little too much concerned with who is going to control the general setup of our health care program. It doesn't matter much what recommendations come out of this conference unless the people who receive them have full faith that you and I have entered this conference with an open mind and that neither group has any desire to persuade the other group before it is ready to be persuaded to see the other's way. I think that is tremendously important.

The recommendation made by Mr. Davis is excellent. The following resolution was adopted in the National Grange meeting: "Medical prepayment plans should be primarily controlled by the consumer or patient." There we have it—the National Grange by resolution taking that position, the medical profession taking the other position. Those of us in the Grange until the next meeting are bound by this resolution. It seems to me that, meeting here for two days, maybe both of us can find it is worth while to make some concession. One of the most constructive steps the medical profession could take would be to join with the farm groups in recommending that if legislation is introduced in the legislature it is a census of this group that the restrictive legislation ought to be done away with and the field opened up for consumers of health service to set up some different plan.

MR. HARRY L. GRAHAM, Indiana Grange: The farm folk are interested in being able to pay for these services ourselves and we want a way over which we'll have some control. We don't want standards to go down. We know what it is to have poor hospital service or no doctors at all. We know what it is to go on low standards. We want them built up and expanded so the little people in the country get your kind of service; and I think the time has come when the medical profession should try to see our point of view on it and to have some faith and trust in the good sense and judgment of the farm folk. They faced this problem a long time when the medical profession didn't seem to be interested in it. We want to pay the doctors for their service but we must not and you must not sponsor legislation which will prohibit doing the thing which we want to do and what you need done for yourself.

MRS. JEROME EVANSON, North Dakota: The state level is where these suspicions are aroused. In the matter of state legislation, we were given the cooperation and the assurance that the medical association will go along on a bill to help bring better health facilities to our rural people. Then our secretary sees fit to have brought before the legislature another bill nullifying all the work that we are doing and instituting a bill in which the medical group will have a veto over anything passed by lay people in an advisory council. The meeting here is going to do no good if when we go back to our states we have the same fights on and the lip service but not the actual cooperation that is necessary to get the job done.

DR. PAGE JETT, Prince Frederick, Md.: When we were fighting the great war we didn't say "Who is going to control it?" We doctors are delivering this service just as the Army and the Navy delivered service in the war. All we ask is that we shall not be hamstrung by lay groups who do not know the problem as we do, just as the Army was not hamstrung by people who did not know how to fight.

Report of the Committee on Nursing Needs of Rural Communities

MRS. CHARLES W. SEWELL, Chairman, and CHARLES W. HOLMAN, Co-Chairman: There is a shortage of nurses, and classes for schools of nursing this fall have enrolled little more than half of the number required. With a desire to improve this situation the Committee on Nursing Needs in Rural Communities makes the following recommendations:

1. Education for later life must begin in the home, where attitudes toward real service to humanity must be developed.

2. Expansion of home nursing courses in high schools and adult education courses should be encouraged. This not only helps individuals to help themselves in time of need but is a means of recruiting students for schools of nursing.

3. Education for nurses should utilize hospital service as far as this service is educational. Such programs might well be augmented by the use of public funds. On the basis of the experience of the Cadet Nurse Corps, the course might be shortened and consideration given to student nurses being assigned to rural hospitals for part of their experience.

4. Practical nurses are urgently needed. This health worker too should be trained and licensed for the protection of the patient.

5. Improve the status of nurses in rural communities in regard to working conditions, professional recognition, opportunity for advancement and continued professional development.

6. Give compensation commensurate with the education required and the quality of service given.

7. The rural people who pay for and use nursing services working with the nurses in local communities can do much to improve the situation. It will take the combined efforts of rural people through their organizations and the professional association of physicians and nurses to solve these problems.

DISCUSSION

MR. GRAHAM L. DAVIS, Michigan: In Michigan we think there should be two types—the registered nurse and the practical nurse, or nurse's aide. We can't recruit them under present conditions, so the approach we're making is through our state department of education. Our state universities and colleges have a definite responsibility in that field. So we're working toward these nurses being registered as students at the university and then using the hospitals, even the small units, for practical experience, but they're students at the university. In that way we shall introduce these nurses to our smaller hospitals and perhaps solve this problem of adequate nursing service for the communities that we have.

DR. G. F. MOENCH, Michigan: As a respresentative of the Health Committee and of the National Congress of Parents and Teachers I want to call attention to a problem that we run

into when trying to develop our program, shortage of personnel and shortage of facilities. I have worked in a rural community all my life. These problems must be solved as a local problem as well as on a state and national basis. There are local resources at our command in every little community if we'll just look around. There are more millions of people represented in some 30,000 units of the Parents and Teachers Association; and in these communities there are schools. The school house furnishes a meeting place for people. Don't forget that the Parent-Teachers Association can be a valuable resource when it comes to working out programs.

DR. W. L. BURNAP, Fergus Falls, Minn.: I have a different view on the nursing problem than that presented. The lack of registered nurses presents a problem dangerous to the hospitals and physicians and the people. The girls are not entering nursing courses, and there are several reasons. One, the ease with which girls from high school can secure employment. There is poor pay for well trained nurses. This situation is the result of the war economy and will adjust itself. The chief cause, we in the rural areas feel, is the unnecessary demands made on the girls by the courses offered in a city hospital. Some years ago there were three year nurse training courses in many of our rural hospitals, two years at home and one in the city hospital. This arrangement provided adequate nurses in adequate supply. This desirable arrangement was arbitrarily terminated by some authorities at the top. There are two reasons why the rural hospitals are successful. The courses are so arranged that the girls can earn their own way. The present plan for licensing nurse's aides might help some but does not solve a real need for registered nurses. There is a solution. Establish a nurse training course in rural hospitals with affiliation with city hospitals. This plan has succeeded and is now succeeding where given the chance.

Report of the Committee on Health Council as Agency for Promoting Rural Health

DR. J. PAUL JONES: This committee believes that a health council should be composed of representatives from three groups: (1) those allied and auxiliary professional groups who render health service, (2) those who receive health services and (3) those governmental agencies officially concerned with health and medical care and also including those voluntary agencies manifesting a continuing interest in health and medical care.

Objectives of Health Council

1. To bring together medical and allied professional and citizen groups to the end that discussion, debate and interchange of opinions and planning of health and medical care may be effected.

2. To encourage, stimulate, foster and support the establishment of health and medical care councils in areas as deemed advisable within each state.

Functions of Health Council

1. To survey medical care and health needs.

2. To determine the existing and needed facilities and personnel for meeting the findings of the survey.

3. To recommend ways and means of providing adequate facilities and personnel to meet the constantly changing needs.

4. To disseminate as widely as possible information pertaining to health and medical care problems and programs.

5. To conduct or promote such meetings as may be helpful in effectuating the program.

This committee recommends that the Rural Health Committee, through the Council on Medical Service of the American Medical Association, provide cooperative assistance to interested state and local groups in establishing health councils.

J. PAUL JONES, M.D., Chairman.
LLOYD C. HALVERSON, Co-Chairman.
FRANK PECK.
MISS WINONA DARRAH, R.N.
V. V. MITCHELL.

DISCUSSION

MISS HELEN BECKER, College of Agriculture, Nebraska: The existing agricultural agencies on the state and local level actually bring to the people education of a health nature. The existing facilities to which I have reference are the land grant colleges through the extension service. In Nebraska we have already done a great deal. The Nebraska State Health Planning Committee, which is actually a health council on the state level, brings together the best thinking of the state university college of medicine, the state department of health representatives from the organizations such as have been mentioned and others. Through this committee we disseminate information through the extension services, the 4-H Club and the women's project clubs. In the next two weeks I shall go on seven community health institutes—one day institutes—in the state of Nebraska. I believe that, because we have some 5,000 county agents in the United States, all states may use these facilities to great advantage.

DR. CHARLES R. HENRY, Little Rock, Ark.: In Arkansas in developing our prepayment health program we consulted with the leaders in the farm bureaus, the FSA and the extension service of the University of Arkansas. The extension service and the farm bureau in Arkansas have been studying ways of bringing better health to the rural communities. Last summer the director of the extension service called a meeting of doctors, dentists, hospital administrators, community leaders, public health workers and others. This group eventually will develop into our state health council. The group recommended that a health specialist be employed by the extension service to provide leadership in the communities in the development of a rural health program. This health specialist has been working since last October and conducts such institutes as Miss Becker says they are conducting in Nebraska. This health specialist interprets to the various groups and organizations Public Law 725. He interprets to community leaders and the people of these institutes prepayment health programs and also the existing health facilities in the community. He points out the need for rural boys and girls entering the health field and, above all, community responsibility in utilizing the facilities that are available. In Arkansas we have already completed the health and hospital survey.

MR. ALBERT S. GOSS, National Grange, Washington, D. C.: It is important that the American Medical Association has brought these groups together. I think the same thing can be done on a county level. I worked with farmers for thirty-five years. Much of it was in the field of insurance. Farmers do not want poor insurance, or poor or unpractical health programs; if competent medical men will participate in these county councils and state councils, the doctors need not have any fear of the kind of program which will develop. The reports of this committee and of committee two for setting up these county councils are the answer; and if we actually want the county councils in the spirit we have here, I have no doubt the whole field of prepayment of medical service will be advanced and these differences which have been expressed today will disappear.

MISS ELEANOR PALMQUIST, R.N., Washington, D. C.: The Joint Committee on Community Nursing Service has prepared a guide that I think will be of help in your local councils in considering the nursing problems. This pamphlet can be secured from the Joint Committee on Community Nursing Service, 1790 Broadway, New York 19.

MR. JOHN H. DAVIS, Washington, D. C.: I represent the National Council of Farm Cooperatives. I want to endorse everything Mr. Goss has said and the others who have spoken for the county council. I think we need them rather soon. When the farmers of the country begin to demand something new as they are now, something better in the case of health and medicine, it is easy to look on that as an attempt to take over. Actually I think it is very different; it is a challenge to do a better job. If we succeed in bringing to those people something better, the end result will be more and better jobs to the medical people.

DR. W. E. GARNETT, Virginia: In Virginia we have had for years the state council, which has something over forty statewide organizations supporting it. We have sponsored and conducted a study of rural medical care needs. We have under way an intensive study of the insurance needs from the rural point of view. The important thing that we have found through this council is a very intensive educational campaign with meetings in communities over the state and circulars widely distributed. We are hoping to move to the county level shortly.

MR. EDGAR A. SHULER, Michigan State College: I think one of the basic problems is an educational problem. Dr. Hoffer at Michigan State College has prepared a report on this work that he has been doing for the past year, which I think might be of interest to you. This schedule or questionnaire attempts to help farm people know when they are in need of medical attention. It doesn't attempt to diagnose the condition, but it does attempt to point out that often we need to go to a doctor early before we're flat on our backs.

DR. CHARLES H. LERRIGO, Topeka, Kan.: I am a physician who has been in Kansas for forty-seven years, seventeen of which were spent almost entirely in rural practice. No one seems to have recognized the great help that will come to you from the tuberculosis and health associations. I suggest that you call in your tuberculosis and health associations as representatives at all your councils. They can give you a lot of health literature. They will provide health education circulars.

FATHER E. D. BUTT, Tennessee: I am rather surprised that nothing has been mentioned about using the churches as a means of disseminating information. In a rural church of which I was pastor in Tennessee we had a rack for pamphlets relating to the Christian life, such as one finds in all churches. Also in this rack we put pamphlets which we got from the county health departments. By having these available in the church we were disseminating them among people who never have got these pamphlets from the health department. As one who has spent most of twenty years in the rural pastorate, this conference is to me one of the most uplifting experiences that I have had recently. I think that on every state or national or county health conference there should be a competent delegation from the churches and that news about this conference, about the plans of this conference, should be put into the hands of every rural pastor of every denomination of every church.

Report of the Committee on Medical Care for Lower Income Groups

MR. OWEN COOPER, Jackson, Miss.: The findings of this committee are based largely on the discussion yesterday by a distinguished group of men who joined this round table. The group met to discuss the medical needs of lower income farm groups. Medical care was defined as preventive, diagnostic and curative services. Lower income groups were defined as those unable to pay the full cost of complete medical care. This broad definition led to difficulty later in determining the means by which such a group might best provide itself with medical care. The following methods and factors were discussed as ways medical care is now extended to the lower income group: 1. Sliding scale of fees whereby physicians adjust their fees in accordance with the patient's ability to pay. 2. Prepayment medical care plans. 3. Tax supported systems for the care of the indigent. 4. Philanthropic and other private agencies. Following discussion of the factors enumerated the group acting as a committee of the whole made the following recommendations: 1. Expansion and increased effectiveness of state and locally supported public health programs, implemented when necessary by federal funds. 2. Expansion and improvement of tax supported systems providing adequate medical care for the indigent and medically indigent. 3. Development of prepayment plans as a contributing factor in the solution of the problem. 4. That there should be no difference in the standards or adequacies of medical care regardless of the income of the patient. The committee makes the following suggestions based on the discussion which was not solidified into definite recommendations:

1. That the health of this lower income group depends in a large part on economic factors such as the provision of adequate housing, adequate clothing and adequate food, and that the correction of this defect depends on the raising and maintaining of the economic level of this group.

2. The committee calls attention to the fact that the definition of the lower income group as given by the conference would probably include about 85 per cent of the population.

3. That a comprehensive study be made of the effective medical care tax supported plans now in operation.

4. That cooperative health associations be expanded and developed on a community level to meet local problems.

5. We believe the issue now facing us is the choice between a system based on voluntary plans supplemented by tax subsidy, applied to the individual, involving a means test, or the adoption of a national personal health service program, supported by taxation. (This may mean income tax, pay roll deduction, or other personal assessment, combined if necessary with some general tax funds.)

OWEN COOPER, Chairman.
EDWARD MERTZ, Co-Chairman.
MISS ELIN ANDERSON.
CLYDE YORK.
NORMAN SCOTT, M.D.
COMMITTEE.

DISCUSSION

MR. W. E. GARNETT, Virginia: As a representative of the Virginia Agricultural Experiment Station, a few years ago I made an intensive study of this question. In many states the extension service reaches relatively few. I want to emphasize the importance of following up the report of this committee as well as of the committee on prepayment medical care. We found that the poor group averaged more than a third more children than an equal number of families of higher standards and that much of the future population of the country is being reared in these poor homes, where there is only inadequate medical care. We have found that this group needs better medical care than most and are least able to provide it.

REV. ANTHONY J. ADAMS, Rural Life Director, Institute of Social Order, St. Louis: The farm organizations for the most part have their health programs, and they have met opposition on the part of the state health boards. I have in mind a number of instances where the people have the committee, they have a couple of doctors on the board, they had nurses, they were prepared to start a cooperative hospital. They sent in their petition. They got no word for several weeks. They finally got their check back and a note saying that the state legislature could not permit a cooperative group to set up a hospital. The directive had to come immediately from the association—the medical association—which stymied the whole thing. The Catholic priest who was pastor in that town, the Methodist minister with his group, the local doctors and nurses had all worked on that. A central committee could iron out some of those difficulties. While I endorse this idea of a central committee, let us use it to strengthen our local committee. The more we centralize control the more likely we are to end up with socialized medicine. We'll fight to the last ditch with the American Medical Association in trying to forestall socialized medicine; but we want to see that cooperation in fostering local groups who are willing to help, who can give the help and who will give the help if they are permitted.

DR. F. S. CROCKETT, Chairman, Committee on Rural Medical Service, American Medical Association: On the national level here we can plan; but to get action it must go out into the states and counties. For that reason we have asked each state medical society to appoint a state committee on rural health; and some thirty-five or thirty-six have done that; and many of them have sent delegates to this meeting. It is expected that within each state that committee will get into close cooperation with the organized farm groups of that state.

None of us know the answer to these things. We are trying to find them out, and we will probably find them in the hard way. We look forward eventually to success.

Mr. Goss speaks of a National Council of Rural Health. Tonight when my committee meets I can take that up with them and see what we can do with the idea. I am very grateful to Mr. Goss for making that suggestion.

Following the end of the formal program I want the doctors who are here from every state, members of all local state committees on medical service, or other doctors who were sent probably to represent that interest, to talk over among ourselves what we can do and what we might be able to do in the states and in the smaller subdivisions of those states. We're impressed with the fact that so many from many different walks of life are interested in this problem. I am grateful to you who have expressed your views.

Address of J. Melville Broughton, Ex-Governor of North Carolina

Dr. Crockett then announced that Ex-Governor J. Melville Broughton of North Carolina could not be present. However, he sent an abstract of his talk, and Dr. George F. Lull, Secretary and General Manager, American Medical Association, read the address.

DR. LULL: At the request of your chairman I will read this abstract of Mr. Broughton's address.

The good health of our citizens is a state and national responsibility. Any program for our national economy that omits health as an essential factor is unbalanced and unsound. The most important "next step in a health program" is to obtain general acceptance of these and related principles by state and national legislative bodies and by the public. Good health is not only a vital part of our national economy; it is our first line of national defense.

These factors were responsible for the passage of the Hill-Burton Federal Hospital Construction Act in July 1946. It is the first time any federal appropriation has ever been made for civilian hospital construction wholly under state or community management and control. It may well mark the beginning of a new era for good health in America.

Doctors and medical associations who have, with justification, opposed "socialized medicine" or "federalized medicine" have with almost complete unanimity accepted the principles and provisions of the Hill-Burton Act. Thus has been laid the foundation for a broad program for good health. Among other steps which should ensue may be the following:

1. The provisions of the Hill-Burton Act should be broadened and appropriations increased in a manner to make certain that full benefits will be experienced by rural areas.

2. Public schools should be required by state laws to give adequate instruction in health and personal hygiene and in home and community health and sanitation. Such instruction should extend to elementary, grammar and high school grades. The selection of textbooks for such instruction should not be left to politicians or even wholly to teacher-boards or commissions. State or other competent health authorities should participate in such selection.

3. Every child in a public school should be physically examined annually by a competent physician at public expense. Where such examination reveals the need for medical or surgical treatment, the parents should be notified. Where poverty or inadequate income prevents the parents from obtaining needed treatment for the child, it should be provided at public expense. In such programs the principle of individual selection or designation of physician or surgeon should be preserved. The fullest cooperation of medical groups in the instructional and clinical phases of the program should be invited and will undoubtedly be given.

4. State legislative bodies should make adequate appropriation for adequate medical care and hospital programs, with full provision for all rural areas and other sections not now adequately served. Appropriations so conditioned as to be unavailable to rural or other areas unable to provide a pro rata contribution, by tax or otherwise, will not solve the health problem. State legislation should be so designed as to take full advantage of the provisions of the Hill-Burton Act and other similar federal enactments.

5. In such a broad health program there can be no place for racial, religious or other discrimination.

6. The widest encouragement should be given to so-called Blue Cross hospital and medical care plans and similar agencies in various industrial groups. Such plans or agencies when adequately regulated and supervised in the public interest are a protection and at the same time encourage thrift and self reliance.

7. The word "indigent" or "charity" should be eliminated from the good health program. It carries something of a stigma that tends to keep away many people who should have the benefit of hospital care.

8. Increasing emphasis must be made on local responsibility and opportunity. The time for looking to Washington for the solution of all our problems is past. The relationship between nation, state and community should be one of cooperation and coordination. No community without a hospital or health center should think of any other form of memorial for the war heroes.

9. The shortage of physicians in rural areas threatens our whole standard of health in the nation. Inducements, gratuities, scholarships and the like may help some, but ultimately the only solution will be more hospitals and health centers in rural areas.

Comment by Mr. Watson Miller

Dr. Crockett then introduced MR. WATSON MILLER, Washington, D. C., administrator of the Federal Security Agency, who said: It so happens that for about two decades I have been on the threshold of medicine. I have been the beneficiary of an unusual amount of skilful surgery, medical treatment, dentistry and effective nursing. I have had sense enough not to try to invade the profession and not prescribe for other people or myself. I am very zealous for American medicine. I shall never consciously do anything to delay it or harm it. On the business of health in rural communities, I don't think that differs in any important aspect from what we are all considering—just more medicine for more people.

Maladjustment in Medical Service

DR. H. H. SHOULDERS, President, American Medical Association: There are many causes or factors which play a part in bringing about the state of maladjustment in individuals and in the conditions with which we are concerned today. Obviously it is not a specific disease for which a specific remedy is available—a single remedy which could be administered with assurances of a certain and speedy cure. It is therefore appropriate for us to think for a moment on a few of the causes which have contributed to the state of maladjustment which exists in medical service. All I can hope to do at this time is to contribute a few thoughts to the thinking that is going on and the questions that are being raised at this conference. I certainly do not hope to give you a specific remedy, for the simple reason that no such remedy exists. It is a situation which must be dealt with symptomatically. Many different means may be required in the management of the situation. At one time it may require sedation of various sorts and at another time it may require stimulation of various sorts.

One of the causes of our problem is illustrated by a story I heard from a reliable source some time ago. It is about a country doctor who was located at a country crossroads in one of the states in the Middle West. He was happy there and busy, but the roads over which he traveled on horseback or by buggy became paved roads. The farmers bought cars and so did he. In a short while he was not busy. He discovered that his patients were going to the town a few miles away for their medical care. He then posted a notice on his office door that he was going to town. The people in the community made a loud protest. His reply to their protest was that many of them were going to town for medical care, since the roads had been improved, and that they were calling him only at night or in emergencies or when the snow was too deep for the town doctor to visit them. This fact they could not deny. He did

move to town and the people of that community became his patients again and he served them from and in the town.

This story could be repeated times without number, and this is one of the causes of the maladjustment we have at the present time. It is a cause also for the sense of maladjustment where no serious maladjustment exists, for the simple reason that the convenience of medical care often receives more emphasis in the minds of some people than the efficiency of medical care.

Another factor of great importance is the progress that has been made by science and invention. The whole pattern of rural life has changed, and the whole pattern of medical care has changed also, owing to science and invention.

The country doctor went on horseback or buggy. He often raised the feed for his horse. He carried most of his equipment with him. He was a good fellow, devoted, kind and generous and, I say, capable. I would not detract from his memory. I have respect, yes, reverence, for his memory. He was near the people and very successful. The sense of nearness was satisfying. They measured distance in miles then and not in minutes. But in all this I must not forget and you must not forget that the country doctor of whom I speak could not prevent or cure typhoid. He visited his patient daily for a period of six to eight weeks, and the mortality was high in spite of all he could do. He could not prevent or cure diphtheria. He had a fracture case occasionally, and he set fractures of arms and legs without the aid of an x-ray. He got many bad results but was not blamed for them. He did the best he could. Today he would be sued for malpractice if he gave the same treatment with the same results, not only that but the people themselves would not stand for it. Today the doctor cannot carry all his equipment with him. A diagnosis may involve many laboratory tests. He travels by automobile and can reach a point 10 miles from his office in less time than he could travel 2 miles on a country road. At that time a woman in labor was sent to the hospital occasionally for a complication. Today it is the rule for women in normal labor to go to the hospital.

Years ago many doctors in towns throughout the country built their own hospitals, equipped them and operated them as private institutions. They did two jobs, furnishing both medical care and hospital care. Many communities were slow to develop a sense of civic duty. They were not quick to develop facilities for their own interest and care. I could name many small institutions that have closed in the last ten to fifteen years.

The pattern of medical practice has changed in another important way. The diseases that required most of the time and interest of the rural practitioner many years ago have disappeared. You rarely see a case of typhoid now, but, on the other hand, fractured arms, legs and backs from automobile accidents occur with increasing frequency. I noticed in the paper a few days ago that there were 100,000 deaths from accidents last year, to say nothing of the millions who were thus injured and survived. In addition to this, many diseases which were rarely ever recognized and treated in those years are recognized and treated effectively today, though the diagnosis and treatment involve the use of facilities and equipment and knowledge unknown to the doctor of early days.

So the location of a doctor at every crossroad in this country would not, in my opinion, solve the problem of efficient medical care. It is a good, well trained doctor, plus equipment and plus facilities which are reasonably accessible by modern methods of transportation which will make adequate and efficient care available. We must not allow our sense of convenience and our desire for convenience to impair our appreciation of efficiency.

This fact was impressed on me some months ago as a result of a conversation with a man I regard as a great farm leader, a man many of you know, Mr. J. Frank Porter, who was president of the Tennessee Farm Bureau until a short time ago. He and I were discussing this problem, and he remarked with great emphasis that the town of Williamsport, Tenn., was in urgent need of a doctor and he gave apparently logical reasons for the statement. At one time three doctors were there. One moved away, one died and the remaining doctor was getting old and feeble. Mr. Porter lives on a fine farm near the village of Williamsport. This town has a population of 112 people. It is surrounded by a thickly settled community in one of the best farming sections of middle Tennessee, and in one of the best counties in Tennessee, Maury County. It is just 12 miles from Columbia, the county seat, which is a town with more than 10,000 population. There are many fine doctors in the town of Columbia and a good hospital and a full time health unit. Mr. Porter has an office in the town of Columbia. A fine paved road connects the two towns, and he covers the distance between them in twenty minutes traveling at a moderate rate of speed. There are, of course, no modern facilities for medical care at Williamsport.

I think Mr. Porter gave a very natural and laudable expression of a community interest as well as a personal interest, but I don't doubt that his thinking was colored to some extent, at least, by the convenience and satisfaction of having a country doctor near at hand even though he patronized the doctors in Columbia and in Nashville when the occasion arose.

Another factor to be considered is that patients, even seriously ill patients, can be moved long distances with speed and comfort and receive better care at the end of their journey than they could have received at home in the old days. Modern inventions have produced modes of patient transport that are efficient, speedy and comfortable. The location of a country doctor at Williamsport would not, in my opinion, solve the medical problem of Williamsport. It would satisfy a sense of need but not supply a complete need regardless of the individual capabilities of the doctor.

This whole idea of allocation of funds was begun for the purpose of demonstrating to the people their benefits and with the idea that the aid could be withdrawn, once an effective demonstration had been conducted. Mind you, I do not recommend the abandonment of the full time health unit, but I must urge the abandonment of a policy which governs the allocation of funds. At frequent intervals we see reference made to the approximately twelve hundred thinly populated poor counties without a full time health service, and this fact is cited as a reason for more appropriations when it is in fact a reason for the alteration of a policy.

I will say also that any opinion to the effect that the people in a county or area without a full time health unit are for that reason without preventive medical services is a very erroneous opinion.

The fact is that, when science developed and perfected means for the prevention of several diseases by vaccination or inoculation, the private practitioners of medicine began their extensive use. I dare say that more preventive medicine of this type has been administered by private practitioners of medicine than by all other agencies combined. It was not the simple regulation which required children to present a certificate of successful vaccination on entering school that accomplished the control of smallpox in this country many years ago, it was the continuous preventive efforts on the part of the general practitioners of medicine.

I wish to make this further observation—that the two groups of people who, in my opinion, should work out the treatment of this maladjustment are at this conference table. They are the representatives of the medical profession and the representatives of the rural people. From this conference then should grow and develop a type of consideration and cooperation which will in time determine what the local needs are, their character and the amount. The matter of voluntary prepayment medical service and insurance plans, in my opinion, can serve a vital function in the financing of the major costs of medical care, and they can accomplish it without hardship on individuals and with the complete preservation of individual independence and without destroying, or even impairing, the vital relationship between patients and doctors. The voluntary hospital prepayment movement is accomplishing the same thing.

THE TAFT-SMITH-BALL-DONNELL NATIONAL HEALTH BILL

An Analysis Prepared by the Bureau of Legal Medicine and Legislation

A revision of the bill sponsored in the Seventy-Ninth Congress by Senators Taft, Ball and Smith was introduced in the Eightieth Congress on February 10 as S. 545, with Senator Donnell of Missouri as an additional sponsor. In general framework the new bill is similar to the earlier one. Its title, however, follows too closely the title of its predecessor and will need revision. It indicates, among other things, that the bill will promote and encourage medical research in the National Institute of Health and through grants-in-aid to the states. The provisions in the earlier bill that would have accomplished such a purpose have been eliminated from S. 545.

The new bill proposes, as did the one introduced in 1946, to enact a "National Health Act" and is pending in the Senate Committee on Labor and Public Welfare, of which Senator Taft of Ohio is chairman. Several changes noted in S. 545, as compared with the first bill, merit initial comment. In the pending bill it is provided that the administrator of the proposed National Health Agency must be "a doctor of medicine, licensed to practice in one or more of the states and who is outstanding in the field of medicine." In the initial bill the administrator was to be either (1) a doctor of medicine with at least eight years of experience in the commissioned corps of the Public Health Service or (2) a doctor of medicine licensed to practice medicine or surgery in one or more of the states, who has had at least five years of active practice and three years of experience in a responsible position in medical research, teaching or administration.

In the bill introduced in the Seventy-Ninth Congress the United States Public Health Service, acting through the Surgeon General, was designated as the administrative agency on the federal level in relation to state programs to provide medical and hospital care for families and individuals of low income. The present bill provides for the establishment in the proposed National Health Agency of an Office of Medical and Hospital Care Services to supervise the administration of state programs. As director of this office will be a doctor of medicine who has had at least five years of active medical practice and who is outstanding in the field of medicine.

A new section in S. 545 will authorize an appropriation of $3,000,000 to assist states in surveying the availability of existing medical, surgical and hospital care to persons unable to pay in full therefor. Another new section would authorize an annual appropriation of $10,000,000 to develop more effective means for the prevention and control of cancer. Other differences between the original bill and S. 545 will be reflected in the analysis that follows.

DECLARATION OF FINDINGS

The necessity for the enactment of S. 545 is predicated on this declaration of findings set forth in section 2: (*a*) that health and medical functions are widely scattered throughout many agencies in the federal government, with resultant confusion and duplication of effort; (*b*) that inadequacies exist in the distribution of public health services and of medical and dental services in the United States, with the result that some persons are unable to secure adequate health and medical services; (*c*) that it is the policy of the United States to aid the states, through consultative services and grants-in-aid, to make available medical, hospital, dental and public health services to every individual regardless of race or *economic* status, and (*d*) that it is the policy of the United States to make provision for voluntary deductions from the salary of federal employees of premiums directed by them to be paid to voluntary nonprofit health insurance funds.

NATIONAL HEALTH AGENCY

Title I of S. 545 proposes the creation in the executive branch of the government of an independent agency to be known as the National Health Agency, to be administered by a national health administrator, appointed by the President, by and with the advice and consent of the Senate. His salary will be $15,000.

Qualifications of Administrator.—The administrator will not be permitted to engage in any other business, vocation or employment. He must be a citizen of the United States and "a doctor of medicine licensed to practice in one or more of the states and who is outstanding in the field of medicine."

Purposes and Duties of Agency.—The agency will promote the general welfare of the people of the United States by aiding and fostering progress throughout the nation in the field of health and medicine and by centralizing in it the activities of the federal government relating to health.

It will be required to (1) encourage the development throughout the nation of health services and facilities; (2) advise and cooperate with other agencies and departments of the federal government and with state governments and agencies, and with private agencies functioning in the field of health; (3) collect and analyze statistics and make studies, investigations and reports on conditions, problems and needs in the field of health in the United States and in other countries, and disseminate and make available information in this field; (4) make reports and recommendations with respect to the most efficient policies and methods for the promotion of health and related services, and (5) carry out such specific duties as may be entrusted to it by the Congress and exercise general supervision over the agencies transferred to it. Under the original bill the agency would also have been required to make recommendations with respect to legislation and matters of administrative policy.

On this agency will be devolved the responsibility for federal governmental activities concerned with (1) the administration of funds appropriated as grants to states for medical and hospital care, dental care, hospital facilities and all other health activities; (2) the prevention of disease through water purification, sewage treatment and the elimination of lake and stream pollution, and promotion of research toward this end; (3) the promotion of maternal, prenatal and child care, and the study and dissemination of information on child growth, development and nutrition; (4) the protection of the national health by promoting purity, standard potency and truthful and informative labeling of foods, drugs and cosmetics; (5) the administration of the Hospital Survey and Construction Act of Aug. 18, 1946 (a responsibility that was not devolved on the agency by the initial bill), and (6) such related matters as shall aid the states and the people in the maintenance of adequate and efficient health facilities and otherwise promote the national health. The bill as printed devolves another responsibility on the agency, namely the training and rehabilitation of persons vocationally handicapped because of permanent disability with the objective of placing such persons in remunerative employment. It is understood that this provision appears in the bill by inadvertance and that this duty will be exercised, as at present, by the Federal Security Agency.

Transfer of Functions to Agency.—There will be transferred to the agency the following agencies, their functions, powers and duties: The United States Public Health Service, Saint Elizabeths Hospital and the Food and Drug Administration. There will also be transferred the functions and duties of the Children's Bureau concerned with the administration of title V,

parts 1 and 2, of the Social Security Act and the functions and duties of the Division of Health Studies in the Bureau of Research and Statistics of the Social Security Administration. No power, function or duty exercised by the Army, the Navy or the Veterans Administration will be transferred to the agency, nor will the agency nor any constituent unit thereof be deemed to have been granted any power, function or duty other than those specifically transferred.

The director of the Bureau of the Budget will be directed to make a study of the activities of the other departments and agencies of the federal government to determine whether any of their activities relating to health, not specifically transferred, should be transferred to the agency. He will be required to complete such study and to submit a report of its result to the Congress by Dec. 31, 1947.

Units of Agency.—In the agency there will be the following constituent units: (1) the office of the Administrator; (2) the Public Health Service, which in turn will assume the administration of Saint Elizabeths Hospital and Freedmen's Hospital; (3) the Office of Medical and Hospital Care Services (a unit not provided for in the earlier bill); (4) the Office of Dental Care Services (a unit not proposed by the earlier bill); (5) the Office of Maternal and Child Health; (6) the Office of Health Statistics; (7) the Office of Food and Drug Administration, and (8) such other constituent units as the administrator finds necessary. The earlier bill also provided for an Office of Vocational Rehabilitation which is omitted from the pending bill. The organization of the Food and Drug Administration will remain unchanged except as it may conflict with the specific provisions of this bill.

The Surgeon General of the United States Public Health Service will be appointed as provided in section 204 of the Public Health Service Act. The heads of other constituent units of the agency will be appointed by the administrator.

Qualifications of Director of the Office of Medical and Hospital Care Services and of the Office of Dental Care Services.—The director of the Office of Medical and Hospital Care Services will be a doctor of medicine licensed to practice medicine in one or more of the states, who has had at least five years of active medical practice and who is outstanding in the field of medicine. The director of the Office of Dental Care Services will be a doctor of dental surgery who has had at least ten years of active practice and who is outstanding in the field of dentistry.

Advisory Council on Maternal and Child Care.—Within the Office of Maternal and Child Health there will be an Advisory Council on Maternal and Child Care to be appointed by the administrator. This council will advise and consult with the head of the office in the formulation and administration of the medical and technical activities of the office. It will be composed of eight members, at least three of whom shall be doctors of medicine and specialists in obstetrics or pediatrics. In the section relating to this advisory council a reference is made on page 10 of the bill, line 11, to the Surgeon General. This reference, it is understood, is a drafting error, and the term administrator should be substituted for the term Surgeon General.

Studies and Reports by Administrator.—The administrator will be required to submit to the Congress and to the President in writing annually a report giving an account of all moneys received and disbursed by him and the agency, describing the work done by the agency and making such recommendations as he may deem necessary for the effective performance of the duties and purposes of the agency.

A new provision will require the administrator to make a study of the organization and staffing of the agency and, within six months after the effective date of the act, report to the Congress his findings and recommendations for promoting the more efficient and effective operation of the agency. Such studies will cover all aspects of the organization and staffing of the agency and of its constituent units and will include (1) salaries, (2) the desirability of retaining or modifying the commissioned corps of the Public Health Service and (3) the desirability of establishing an Office of Health and Medical Research as a constituent unit of the agency.

Appropriations.—There will be authorized to be appropriated for the administrative expenses of the agency for each fiscal year such sum as may be necessary.

Effective Date of Title.—Title I of the bill will take effect July 1, 1947. The administrator, however, may be appointed by the President, and his appointment confirmed by the Senate, at any time after the enactment of the bill, but the appointment will not take effect until July 1, 1947.

PREVENTION AND CONTROL OF CANCER

The pending bill contains a new provision authorizing an annual appropriation of $10,000,000 to enable the Surgeon General of the Public Health Service to develop more effective measures for the prevention and control of cancer and to assist, through grants to states, counties, health districts and other political subdivisions of the states in establishing and maintaining adequate measures for the prevention and control of cancer.

MEDICAL SERVICE FOR LOW INCOME GROUPS

Title II of the bill would add a new title to the Public Health Service Act, title VII, to assist the states to provide general health, hospital and medical services for families and individuals with low incomes. The new title VII is in two parts, part A—Medical Care Survey, a provision not included in the earlier bill, and part B—Medical Care Services.

Medical Care Survey.—The apparent purpose of part A is to authorize an appropriation of $3,000,000 to assist states in making a statewide inventory of existing medical, hospital and surgical care preparatory to the formulation of a plan for extending such care as contemplated by part B. Before a state may receive financial aid under part A, an application must be filed with and approved by the director of the Office of Medical and Hospital Care Services. This application must (1) designate a single state agency as the sole agency for making the survey, (2) provide for the designation of a state advisory council to include representatives of nongovernmental organizations or groups, and of state agencies concerned with the provision of medical or hospital care services, including representatives of the users of such services, selected from among persons familiar with the need for such services in urban or rural areas, to consult with the state agency in carrying out the survey, (3) provide for making an inventory and survey and for developing a program in accordance with part B, and (4) provide that the state agency will make such reports as the director may from time to time reasonably require.

Allotments for Surveys and Planning.—On approval of an application, a state will be entitled to receive an allotment of such proportion of any appropriation made available for surveys and planning as its population bears to the population of all the states. Within such allotment, it will be entitled to receive 33⅓ per cent of its expenditures incurred in making the survey and in the preparation of a plan. No allotment to any state will be less than $10,000.

Medical Care Services.—Part B will authorize an appropriation of $200,000,000 for each of five fiscal years to assist the states in providing general health, hospital and medical services for families and individuals with low income. During and after this five year period the Congress will review the program and determine the amount to be authorized thereafter.

State Plans.—Any state desiring to participate in this program may submit a plan to the director which must:

1. Designate a single state agency as the sole agency for the administration of the plan or designate such agency as the sole agency for supervising the administration of the plan, "providing that on or before 1949 such agency shall be the state health agency."

2. Provide for the designation by the governor of a state medical and hospital care advisory council, to include representatives of nongovernment organizations or groups, and of state agencies concerned with the administration or utilization of health, medical or hospital services, including representatives of state medical associations, state hospital associations, voluntary nonprofit prepaid hospital plans and voluntary nonprofit prepaid medical care plans, or other groups interested in

the improvement of medical and hospital services and in the better distribution thereof.

3. Contain satisfactory evidence that the state agency will have authority to carry out the plan.

4. Set forth a statewide program designed and calculated to provide, within five years, (*a*) hospital services, surgical services and medical services for all those families and individuals in the state having insufficient income to pay the whole cost of such, and (*b*) periodic physical examination for all children in elementary and secondary schools in the state. Such a program may, (1) at the option of the state, provide medical care services in institutions, in the home or in physicians' offices; (2) provide for the furnishing of such services to such families and individuals by means of payments in the nature of premiums or partial premiums or reimbursement of expenses or otherwise by the state, to any voluntary health, medical or hospital insurance fund, or other fund, operated not for profit, in behalf of those families and individuals unable to pay the whole cost of such services or insurance therefor; (3) include and take account of services rendered or to be rendered by governmental subdivisions of the state and by private organizations operating not for profit and may provide for the payment to such institutions by the state or subdivision for care to such families and individuals, and (4) include payments to physicians practicing in areas which, without such payments, would be unable to provide sufficient income to attract a practicing physician. The program must provide for the collection of proper charges of less than the total cost of such services from persons unable to pay in whole but able to pay in part therefor.

5. Describe the financial contribution for the support of the plan to be made by the state, its local subdivisions, and its private institutions, "which contributions shall be sufficient to carry out the program . . . at the end of said period of five years." The financial contribution made by the state and its governmental subdivisions must be at least equal to the amount contributed for similar purposes in the year 1946 and at least equal to the federal aid made available to the state under this legislation. There has been added to the pending bill a new provision to the effect that nothing in it shall "modify obligations assumed by the federal government under other statutes for the medical and hospital care of veterans." This would seem to mean that if a veteran is entitled to medical and hospital services at government expense and if such services are supplied through a state program, then the federal government will pay the full cost and not merely the percentage it normally would pay for services rendered under a state plan.

6. Set forth the relative need of the various proposals required to carry out the plan and provide for the proper priority between such proposals, based on such need, as financial resources become available.

7. Be based on a statewide inventory of existing medical, surgical and hospital care, including that provided by the state and by private organization and shall describe in detail the extension of such services to the end that they be furnished without discrimination on account of race, creed or color to all persons unable to pay in full therefor.

8. Provide that the state agency will make such reports as the director may from time to time reasonably require and afford to the director, on demand, access to the records on which the information is based.

9. Provide that the state agency will from time to time review its state plan and the operation thereof and submit to the director any modifications thereof which it considers necessary.

Approval of State Plans.—If a state plan fulfils the conditions specified in the preceding paragraphs, it must be approved by the director. If a plan is disapproved for failure to comply with the conditions named, the National Medical Care Council (erroneously referred to in the pending bill as the National Health Council) must, on the request of the state agency, afford it an opportunity for hearing.

No plan may be disapproved because the director disagrees with the methods proposed, if the program is designed and calculated by July 1, 1952 to provide hospital services, surgical services, medical services and periodic physical examinations at a cost within the probable financial resources of the state with federal aid. It is expressly provided that the state shall devise, in each case *methods* by which this end is to be attained.

Allotments to States.—Each state with an approved plan will be entitled to an allotment for each fiscal year of a sum bearing the same ratio to total federal appropriation as the product of (*a*) the population of such state and (*b*) its percentage of tax-paying ability bears to the sum of the corresponding products for all the states having plans approved. The percentage of tax-paying ability of a state will be that percentage which bears the same ratio to 50 per cent as the per capita income of the continental United States (excluding Alaska) bears to the per capita income of such state, except that such percentage shall in no case be more than 66⅔ per cent or less than 25 per cent. Sums allotted to a state for a fiscal year and remaining unencumbered at the end of the year will remain available to the state for the next fiscal year.

Withholding of Allotments.—Allotments to a state may be discontinued with the approval of the administrator if the director, after reasonable notice and opportunity for hearing to the state agency, finds (1) that the state agency is not complying substantially with the provisions of the plan theretofore approved by the director or (2) that any federal funds have been diverted or (3) that the state and its governmental subdivisions have failed to provide toward the carrying out of the plan at least as much money as received from the federal government. A dissatisfied state whose allotments have been discontinued may appeal to the United States circuit court of appeals for the circuit in which the state is located. The findings of fact by the director, unless substantially contrary to the weight of evidence, will be conclusive. The court may, however, for good cause remand the case to the director to take further evidence.

Regulations; National Medical Care Council.—The director will be authorized to make such administrative rulings as he finds necessary, and in administering the title he will be required to consult with a National Medical Care Council (designated as the National Health Council in the initial bill), consisting of the director ex officio, who shall serve as chairman, and eight members appointed by the administrator. Five of the eight appointed members will be persons who are outstanding in the fields pertaining to medical and hospital care, and at least four of them must be doctors of medicine. The other three appointive members must be persons familiar with the needs for medical and hospital care in urban and rural areas. The council will be authorized to appoint such special and technical committees as may be useful in carrying out its functions. The council will meet as frequently as the administrator deems necessary, but not less than once each quarter. On the request of three or more members, it will be the duty of the administrator to call a meeting of the council.

Miscellaneous.—If the director believes that the purposes of this title would be promoted by a conference of representatives of state agencies, he may call such a conference. On the application of five or more such state agencies, it will be his duty to call a conference of representatives of all state agencies joining in the request. A conference of representatives of all such state agencies must be called annually by the director.

Except as otherwise specifically provided, nothing in this title may be construed as conferring on any federal officer or employee the right to exercise any supervision or control over the administration, personnel, maintenance or operation of the health services with respect to which any funds have been or may be expended under this title.

DENTAL HEALTH SERVICES

Title II of the bill would add another title to the Public Health Service Act, title VIII, proposing federal funds to assist the states to provide dental examination for school children and necessary dental care for those school children and other individuals and families unable to pay the whole cost of such care. As with the case of the title relating to medical services, title VIII is divided into two parts, part A, authorizing an appropriation of $1,000,000 to assist the states in making dental sur-

veys, and part B, relating to state programs for extending dental care services under which there will be authorized to be appropriated for the fiscal year ending June 30, 1948 the sum of $8,000,000, for the fiscal year ending June 30, 1949 the sum of $12,000,000, for the fiscal year ending June 30, 1950 the sum of $16,000,000, and for each of the following fiscal years the sum of $20,000,000. Through what appears to be a drafting error, these dates in the pending bill are at variance with those just stated and must be corrected before action is taken on the bill.

For a state to take advantage of this title, it must submit plans to the director of Office of Dental Care Services for his approval. The requirements with respect to such plans parallel closely the requirements specified for plans for general medical services in that they must designate a single state administrative agency which "after 1949" must be the state health agency, provide for a dental health advisory council, describe the financial participation required from the state and its governmental subdivisions, and so on. One requirement is that a plan must set forth a statewide program designed and calculated within five years to provide for the periodic inspection of the teeth of all children in the elementary and secondary grades of public and nonpublic schools in the state and to provide for the dental care and treatment of dental diseases and dental defects, including prophylaxis, filling, x-ray, extraction and related care, other than straightening, of the teeth of those children in the elementary and secondary grades of public and nonpublic schools of the state, who, and whose family or guardian, have insufficient income to pay for the whole cost of the services. The program may at the option of the state provide dental care for those families and individuals in the state having income insufficient to pay the whole cost of such service.

DENTAL RESEARCH

The bill introduced in the Seventy-Ninth Congress contained provisions relating to research in the fields of general medical health, neuropsychiatry and dentistry. Title II of the pending bill would add another title to the Public Health Service Act, title IX, providing for dental research only. It would authorize an appropriation of a sum not to exceed $2,000,000 for the erection and equipment of an adequate building for the use of the proposed National Institute of Dental Research to be created as a division of the National Institute of Health. Additional appropriations would be authorized to further research in dental diseases and impairments and to establish scholarships in the field of dental health.

MISCELLANEOUS

Title III of the pending bill, after proposing certain technical amendments to existing laws, provides that on the direction of any officer or employee of the government of the United States, requesting the government to deduct from the salary of such employee a fixed sum or percentage to be paid to any voluntary health insurance fund, such sum or percentage shall be deducted from the salary and paid as directed by the employee or officer. The term "United States" is defined to mean all departments, bureaus, agencies and other divisions of the government and corporations the stock of which is wholly owned by the government. The term "health insurance fund" is defined to include any nonprofit organization undertaking to provide or to insure against the expense of hospital, medical, dental or other services connected with health.

This title also directs the Secretary of the Treasury, beginning with the fiscal year ending June 30, 1948, to deposit for each year in a special fund in the Treasury of the United States proceeds of taxes, duties, imposts or excises in an amount equal to the aggregate of the amounts authorized to be appropriated for such year under the bill. Amounts deposited in such fund will be available for expenditure only pursuant to appropriations made under authority of the legislation, and no moneys will be payable on any of said appropriations except from the fund. Any amounts remaining in the fund after the expiration of the period for which such amounts are available for expenditure will be covered into the general fund of the Treasury.

Official Notes

SECRETARY OF COUNCIL ON MEDICAL EDUCATION AND HOSPITALS APPOINTED

The Board of Trustees of the American Medical Association has appointed Dr. Donald G. Anderson of Boston as secretary of the Council on Medical Education and Hospitals, effective July 1, 1947. Dr. Anderson is dean of the Boston University School of Medicine. He is a graduate of Harvard College and received the M.D. degree from Columbia. He has had hospital and academic appointments at Boston City Hospital, Presbyterian Hospital in New York, Evans Memorial and Massachusetts Memorial Hospitals in Boston, and Columbia. During the war he was associated with Dr. Chester Keefer in penicillin research for the Office of Scientific Research and Development. His research publications deal primarily with the employment of the sulfonamide drugs, penicillin and streptomycin in the chemotherapy of infections.

Washington Letter

(From a Special Correspondent)

March 21, 1947.

Rest for President Truman on Advice of Physician

The President's brief vacation in Florida was taken on strict orders of his personal physician, Brig. Gen. Wallace H. Graham. General Graham said that Mr. Truman's health is "excellent and actually radiant. It's just that he's been going pretty hard lately and he needs a rest just like everybody else."

Proposal That Pentagon Be Used as a College for Veterans

Representative Lane, Massachusetts Democrat, has presented a bill to Congress advocating that the Pentagon Building be used as a university to train veterans for careers in peacetime. Mr. Lane pointed out that Governor Maurice J. Tobin of Massachusetts has authorized the use of an army camp as a state college for veterans. It has not been indicated whether medical subjects would be included.

Launching of Cancer Survey

The first complete cancer survey to be held in the District of Columbia has been launched and, when completed, a cancer program will be mapped out by the American Cancer Society. The U. S. Public Health Service will assist District of Columbia officials and the local cancer society. Dr. Harold Dorn, cancer statistician, National Cancer Institute, will direct the Washington survey.

Continuation of War on Rodents

Dr. George C. Ruhland, health officer for the District of Columbia, anounced that the long continued effort to rid the nation's capital of rodent pests will be continued again this year. He told a delegation of complaining citizens that "there are not enough people in the employ of the District government to do all the work necessary to lessen the pest and rodent problems in Washington."

Veterans Administration Asks Condemnation of Hospital Site

Refusal by the owners of an $851,436 offer for the 25 acre Nevius tract in Arlington County, sought by the Veterans Administration as the site of a new $15,000,000 hospital, has prompted that agency to start condemnation proceedings. Work on the hospital will start in June, if the agency takes possession, and should be completed in eighteen months or two years.

Approval of Bill on Certification of Streptomycin

President Truman has signed a bill which requires federal inspection and certification of streptomycin.

Medical Legislation

STATE LEGISLATION

Arizona

Bill Passed.—H. 206 passed the house March 5. It proposes a law providing for the licensing, regulation and **inspection of hospitals** within the state.

Arkansas

Bill Passed.—S. 301 passed the senate March 3. It proposes that **any person desiring to be married** shall file a medical certificate from a duly licensed physician showing that the applicant has been given a physical examination and is not infected with syphilis in a stage of that disease which is or may become communicable to the marital partner.

California

Bill Introduced.—A. 2428, to amend the business and professions code, proposes, under certain circumstances, to authorize **licentiates of other states** to act as resident or assistant resident physician and surgeon in state hospitals for a period of not exceeding one year.

Colorado

Bill Introduced.—S. 453, to amend the law relating to the **practice of chiropody**, proposes to define the practice of chiropody as "the diagnosis and medical, surgical, mechanical, manipulative and electrical treatment of ailments of the human toe, foot and leg, excepting any amputation and excepting the administration of an anesthetic other than local." The proposal also defines the terms "toe, foot and leg," "amputation," "diagnosis," "medical treatment," "surgical treatment," "mechanical treatment," "manipulative treatment" and "electrical treatment."

Kansas

Bill Introduced.—H. 327 proposes the creation of a **naturopathic examining board** and defines naturopathy as "the prevention, diagnosis and treatment of human injuries, ailments and diseases by means of any one or more of the psychological, physical or mechanical, chemical or material forces or agencies of nature."

Maryland

Bill Passed.—H. 247 passed the house March 6. It proposes to prohibit certain types of **advertising by osteopaths**, chiropractors, physiotherapists and naturopaths.

New Hampshire

Bill Introduced.—H. 371 proposes the enactment of a hospital licensing law.

Bill Enacted.—H. 154 was approved March 4. It amends the law relating to **medical service corporations** by authorizing the agents of such corporations to be nonresidents of the state.

North Dakota

Bill Passed.—H. 52 passed the senate March 3. It proposes to amend the law relating to hospitals by setting up rules and regulations for the licensing of **maternity homes** and maternity hospitals.

Oregon

Bill Passed.—H. 7 passed the senate March 5. It proposes to require all physicians licensed by the state board of medical examiners to **report immediately to the local health officer** the name, sex, date of birth and address of every person diagnosed as a case of epilepsy or similar disorder characterized by momentary or prolonged lapses of consciousness or control, which is or may become chronic.

Pennsylvania

Bill Introduced.—H. 493 proposes the creation of a state **board of massage examiners** and defines massage as the art of body massage either by the hand or by mechanical apparatus, oil rubs, hot and cold packs, cabinet baths (excluding fever therapy), tub, shower, sitz and similar baths.

Texas

Bill Introduced.—H. 503 proposes the enactment of a state **hospital survey and construction act** requiring a statewide survey of hospital facilities and the preparation of a program for the construction of additional needed facilities. The proposal also requires the appointment of an advisory hospital council and the establishment of regulations for the purpose of obtaining federal funds to assist in survey and construction programs.

Vermont

Bill Passed.—H. 164 passed the house March 5. It proposes an appropriation for the continued maintenance of the Vermont **blood plasma bank.**

Washington

Bill Passed.—H. 378 passed the house March 3 and the senate March 8. It proposes to require applicants for a **license to practice medicine** and surgery to have graduated from a medical school accredited and approved by the Association of American Medical Colleges and the Council on Medical Education and Hospitals of the American Medical Association.

West Virginia

Bill Enacted.—S. 71 was approved March 5, 1947. It amends the law relating to medical and hospital service corporations by authorizing such corporations to **promote and encourage reciprocity** with similar plans both within and without the state.

Coming Medical Meetings

Alabama, Medical Association of the State of, Birmingham, April 14-16. Dr. Douglas L. Cannon, 519 Dexter Ave., Montgomery 4, Secretary.

American Association for the Study of Goiter, Atlanta, Ga., April 3-5. Dr. Thomas C. Davison, 478 Peachtree St., N. E., Atlanta 3, Secretary.

American Association of Anatomists, Montreal, Canada, April 3-5. Dr. Normand L. Hoerr, 2109 Adelbert Road, Cleveland 6, Secretary.

American Association of Industrial Physicians and Surgeons, Buffalo, N. Y., Statler Hotel, April 26-May 4. Dr. Frederick W. Slobe, 28 E. Jackson Blvd., Chicago 4, Secretary.

American College of Physicians, Chicago, April 28-May 2. Mr. E. R. Loveland, 4200 Pine St., Philadelphia 4, Secretary.

American Laryngological Association, St. Louis, April 23-24. Dr. Arthur W. Proetz, 12 Westmoreland Place, St. Louis 8, Secretary.

American Laryngological, Rhinological and Otological Society, St. Louis, April 25-26. Dr. C. Stewart Nash, 288 Alexander St., Rochester 7, N. Y., Secretary.

American Otological Society, St. Louis, April 21-22. Dr. Gordon D. Hoople, 713 E. Genesee St., Syracuse 2, N. Y., Secretary.

American Society for Clinical Investigation, Atlantic City, Chalfonte-Haddon Hall, May 5. Dr. Eugene A. Stead Jr., Grady Hospital, Atlanta 3, Georgia, Secretary.

American Society for Research in Psychosomatic Problems, Atlantic City, May 3-4. Dr. Edwin G. Zabriskie, 714 Madison Ave., New York 21, Secretary.

Arizona State Medical Association, Tucson, May 7-10. Dr. Frank J. Milloy, 112 N. Central Ave., Phoenix, Secretary.

Arkansas Medical Society, Little Rock, April 17-19. Dr. William R. Brooksher, 602 Garrison Ave., Fort Smith, Secretary.

Association of American Physicians, Atlantic City, May 6-7. Dr. Joseph T. Wearn, Lakeside Hospital, Cleveland 6, Secretary.

California Medical Association, Los Angeles, Hotel Biltmore, April 30-May 3. Dr. L. Henry Garland, 450 Sutter St., San Francisco 8, Secretary.

Connecticut State Medical Society, New Haven, April 28-30. Dr. Creighton Barker, 258 Church St., New Haven 10, Secretary.

Florida Medical Association, Miami, April 20-23. Dr. Robert B. McIver, P. O. Box 1018, Jacksonville, Secretary.

Georgia, Medical Association of, Augusta, Bon Air Hotel, April 22-25. Dr. Edgar D. Shanks, 478 Peachtree St. N. E., Atlanta, Secretary.

Hawaii Territorial Medical Association, Lihue, Kauai, May 1-4. Dr. Harry L. Arnold Jr., 510 S. Beretania St., Honolulu 53, Secretary.

Iowa State Medical Society, Des Moines, April 16-18. Dr. John C. Parsons, 406 Sixth Ave., Des Moines 9, Secretary.

Maryland, Medical and Chirurgical Faculty of, Baltimore, April 22-23. Dr. W. Houston Toulson, 1211 Cathedral St., Baltimore 29, Secretary.

Mississippi State Medical Association, Biloxi, May 6-8. Dr. T. M. Dye, Box 295, Clarksdale, Secretary.

Missouri State Medical Association, Kansas City, March 30-April 2. Mr. Thomas R. O'Brien, 634 N. Grand Blvd., St. Louis 3, Executive Secretary.

Nebraska State Medical Association, Omaha, April 28-May 1. Dr. R. B. Adams, 416 Federal Securities Bldg., Lincoln 8, Secretary.

New Jersey, Medical Society of, Atlantic City, Haddon Hall, April 22-24. Dr. Alfred Stahl, 160 Lincoln Ave., Newark 4, Secretary.

New Mexico Medical Society, Albuquerque, April 30-May 3. Dr. H. L. January, 221 West Central Ave., Albuquerque, Secretary.

New York, Medical Society of the State of, Buffalo, May 5-9. Dr. Walter P. Anderton, 292 Madison Avenue, New York 19, Secretary.

North Carolina, Medical Society of the State of, Virginia Beach, Va., Cavalier Hotel, May 12-14. Dr. Roscoe D. McMillan, P. O. Box 232, Red Springs, Secretary.

Northern Tri-State Medical Association, Detroit, April 8. Dr. John L. Stifel, 232 Michigan St., Toledo 2, Ohio, Secretary.

Ohio State Medical Association, Cleveland, May 6-8. Mr. Charles S. Nelson, 79 E. State St., Columbus 15, Executive Secretary.

Oklahoma State Medical Association, Tulsa, Mayo Hotel, May 14-16. Mr. R. H. Graham, 210 Plaza Court Bldg., Oklahoma City, Executive Secretary.

Southwest Allergy Forum, Shreveport, La., March 31-April 1. Dr. Sim Hulsey, 505 Medical Arts Bldg., Fort Worth, Texas, Secretary.

Tennessee State Medical Association, Memphis, April 8-10. Dr. W. M. Hardy, 706 Church St., Nashville 3, Secretary.

Texas, State Medical Association of, Dallas, Adolphus Hotel, May 5-8. Dr. Holman Taylor, 1404 W. El Paso St., Fort Worth 3, Secretary.

GOVERNMENT SERVICES

ARMY

BENEFITS TO MEDICAL DEPARTMENT OF PROPOSED LEGISLATION

The benefits to the Medical Department of the proposed legislation before Congress (H. R. 2536) on procurement, promotion and elimination of Regular Army officers are outlined in the following statement issued by the Surgeon General's Office:

The bill provides that section 10 of the National Defense Act be amended to read "The Medical Department shall consist of Surgeon General with the rank of major general, four assistants with the rank of brigadier general, one of whom shall be an officers of the Dental Corps" is amended to read "The Medical Department shall consist of one Surgeon General with the rank of major general, one assistant with the rank of major general who shall be an officer assigned to the Dental Corps, and three assistants with the rank of major general or brigadier general as determined by the Secretary of War."

The bill authorizes a strength of active permanent general officers of the Regular Army in the Medical Corps equal to ¾ of 1 per cent of the authorized active commissioned strength of the Medical Corps of the Regular Army. Of a total authorized strength of active general officers there is authorized 50 per cent in the grade of major general and 50 per cent in the grade of brigadier general.

It provides for promotion lists in the Medical Department as follows: The Medical Corps Promotion List, the Dental Corps Promotion List, the Veterinary Corps Promotion List and the Medical Service Corps Promotion List. Of the total authorized promotion list strength for the entire army there is authorized 8 per cent in the grade of colonel, 14 per cent in the grade of lieutenant colonel, 19 per cent in the grade of major, 23 per cent in the grade of captain, 18 per cent in the grade of first lieutenant and 18 per cent in the grade of second lieutenant. The authorized number in each of the several grades in each of the several promotion lists is to be prescribed by the Secretary of War by a schedule of percentages in grades for that list, which schedule of percentages may be different for each promotion list. However, a saving clause provides that, irrespective of any vacancy in any grade, except general officers and colonels, whenever an officer whose name is carried on any recommended list under provision of this section completes for promotion purposes the prescribed number of years in the grade of first lieutenant, captain and major, the authorized number of officers in the grade of captain, major and lieutenant colonel respectively in the applicable promotion list shall be temporarily increased, if necessary, to authorize the appointment in that grade of such officer and all officers of his grade and promotion list whose names appear above his on the recommended list, and such officers shall be simultaneously appointed in that grade retaining among themselves their existing relative seniority. Until Dec. 31, 1947 initial appointments and promotions shall continue to be made in accordance with the present provisions of the integration and other laws but effective Dec. 31, 1947 no further appointments shall be made except under the provisions of this bill. The bill provides for promotion by selection to all grades to fill existing vacancies. However, irrespective of the existence of any vacancies promotion list officers of the line of the Army may be selected for promotion to the grade of first lieutenant, captain, major and lieutenant colonel on the completion of three years' service, seven years' service, fourteen years' service and twenty-one years' service. However, for the Medical Department each person appointed as an officer of the Regular Army shall at the time of appointment be credited with the amount of service equal to four years for the Medical Corps, three years for the Dental Corps and two years for the Veterinary Corps, which means that an officer in the Medical Corps appointed as a first lieutenant will be promoted to the grade of captain on the completion of three years' service, to the grade of major on the completion of ten years' service and to the grade of lieutenant colonel on the completion of seventeen years' service and is eligible for selection to the grade of colonel on the completion of eighteen years' service if vacancies do not occur in the respective grade at an earlier date. Therefore, effective Dec. 31, 1947 each officer of the Medical Corps who on that date has less than four years' service credit, each officer of the Dental Corps who has less than three years' service and each officer of the Veterinary Corps who has less than two years's service shall be credited for promotion purposes with four years', three years' and two years' service respectively.

Since the integration laws known as Public Laws 281 and 670, 79th Congress, permitted credit for appointment purposes to officers of the Medical Department equal to the difference between their age at the time of appointment and the age of 25 years an inequity was created for officers of the Medical Department of the Regular Army whose average age at the time of original appointment was 28 5/12 years. In order to overcome this inequity and place all officers of the Medical Department on equal footing so far as age in grade is concerned, the bill provides for the granting of credit to officers of the Medical Department commissioned between June 27, 1926 and Dec. 28, 1945 and who had continuous active commissioned service in the Regular Army since such appointment. Effective Dec. 28, 1945 such officers are credited respectively with additional years of service as follows: Medical Corps 3 5/12 years, Dental Corps 3 1/12 years and Veterinary Corps 1 1/12 years. The service credited shall be counted for promotion and permanent seniority purposes only. No change, however, will occur in the relative permanent seniority standing of any officer who held a commission in any of these corps on Dec. 28, 1945.

The bill provides that on July 1, 1948 or at the earliest practicable date thereafter Regular Army officers shall be promoted and appointed in the grades of first lieutenant, captain, major and lieutenant colonel to fill initial requirements which exist in those respective grades. In the case of all Medical Department Promotion Lists, owing to the present reduced strength of the various corps there now exists a number of vacancies, which means that officers at present in the various corps of the Medical Department, those being integrated and the ones to come into the service after Dec. 31, 1947 may look forward to more rapid promotion than has ever heretofore existed in the Medical Department of the Army.

In addition to promotion to permanent grades in the Regular Army, the bill provides for promotion to temporary rank whenever the number of permanent appointments in the grades of colonel, lieutenant colonel, major, captain and first lieutenant respectively is less than the number authorized in these grades in such promotion list.

The bill provides that from time to time officers of the reserve components of the United States Army may with their own consent be ordered to active federal duty for such length of time as the President may prescribe and that when the total number of officers serving on active duty, Regular Army, and all officers of the Army of the United States of any component exceeds the authorized active commissioned strength of the Regular Army the Secretary of War shall determine the requirements in each of the several grades, and temporary promotions are authorized for officers of these components to fill these requirements.

It is anticipated that there will exist in the Medical Department of the Regular Army 1,900 vacancies in the Medical Corps, 370 vacancies in the Dental Corps, 10 vacancies in the Veterinary Corps and 440 vacancies in the Medical Service Corps.

Even though all these vacancies in the Medical Department of the Regular Army could be filled there will still be needed several thousand reserve component officers on active duty to meet the requirements in each and every corps of the Medical Department to fulfil the needs of the anticipated strength of the interim army.

EMPLOYMENT OF A. S. T. P. GRADUATES BY THE ARMY

Approximately 12,000 medical officers received at least part of their training under the Army Specialized Training Reserve Program. Of this number 4,000 have served with the Army and have been separated, 5,000 remain on active duty and 3,000 are currently completing their internships. All the latter may expect to serve for two years, whether or not some of them are deferred for additional hospital training.

During the war the 9-9-9 house officership program provided the Army with a certain proportion of men having some advanced training. All 9,000 physicians who have served or are now serving received a nine months internship, 3,000 had eighteen months of hospital work and 1,500 were deferred for a total of twenty-seven months of house officer training. In general, officers with this additional training were assigned to duties carrying greater professional responsibilities.

The drastic reduction in army strength (from 8,300,000 to 1,300,000) and in patient load (from 365,000 to 55,000) permitted a decrease in medical officers from 48,000 to 6,400, of which 5,000 are A. S. T. P. graduates. Man for man replacements or rotation of the present medical officers cannot be effected by employing entirely physicians who have had only nine months of internship. Replacement needs are such as to require some men with longer training than nine months of internship. The task of caring for the Army's 55,000 patients is such that men with nine months of internship cannot automatically replace an equal number of men now in service.

Therefore, plans were made which were aimed to provide the Army with a number of men having more than the minimum of intern training by July of 1948 by the deferment program announced in December (THE JOURNAL, Dec. 21, 1946, p. 1017). The entire 3,000 A. S. T. P. interns were allowed to continue their hospital services until July 1, 1947. This adjustment had nothing to do with army needs; it was made to integrate internships with the decelerated medical school curriculum.

Further deferment for additional training was projected for half of these interns, as was done throughout the war under the 9-9-9 program. Interns numbering 1,200 were to be permitted an additional six months of training (to Jan. 1, 1948) and 300 an additional twelve months (to July 1, 1948). The latter group of 300, taking their additional training in medical school hospitals, was especially needed as replacements for D specialists.

Although the deadline for making these deferments was March 1, 1947, there were only 650 applications for deferment by this date. Of these, 350 have been deferred six months and 300 for one year.

The program was attempted to provide the Army with the medical officers it needs for assignments requiring previous hospital training of different durations. All the 3,000 A. S. T. P. men now in internships may anticipate two years of army service, including terminal leave, whether or not they are deferred.

INSECTS SURVIVE FLIGHT INTO THE IONOSPHERE

Living organisms have survived the penetration of the ionosphere in the war head of a captured German V-2 rocket fired from White Sands, N. M., the War Department has announced. Fruit flies, included in containers which held instruments and cameras installed by the Army Air Forces, have been recovered alive and seemingly none the worse for the experience.

The effect on the insects of the flight at supersonic speeds, along with the exposure to the heat and cosmic radiations of upper air regions, were part of experiments conducted by AAF technicians and civilian scientists.

The flies were placed aboard the rocket by researchers from the University of New Mexico. The last V-2 reached an altitude of more than 360,000 feet, the highest altitude attained by a living thing from the earth's surface.

The descent of the container took about an hour from the time it was ejected from the rocket at the apex of the missile's flight.

ARMY AWARDS AND COMMENDATIONS

Colonel Paul H. Streit

The Legion of Merit and later the Oak Leaf Cluster were recently awarded to Col. Paul H. Streit, now at Brooke General Hospital, Fort Sam Houston, Texas. The citations read in part as follows: For exceptionally meritorious conduct in the performance of outstanding service from June 21, 1942 to May 1, 1945. As commanding officer of a general hospital, Colonel Streit greatly increased its capacity, while his adoption of occupational therapy on a large scale aided materially in the rapid recovery and reconditioning of casualties. Later, as surgeon, Central Pacific Base Command, he reorganized the medical service in the Hawaiian area, planned and executed the medical logistical support for combat operations and superintended the hospitalization of battle casualties of the Pacific Ocean areas. By his devotion to duty, executive ability and superior medical and military attainments he made material contributions to the successes of our armed forces in the war against Japan. As commanding officer, Dibble General Hospital, Menlo Park, Calif., from June 1945 to February 1946 he initiated and supervised a comprehensive program of training and care for the blind and in cooperation with the Corps of Engineers designed and constructed clinics and wards for the treatment of blinded patients. Colonel Streit's work in this field did much to lighten the burden of the patients and was a valuable contribution to the medical service. Dr. Streit graduated from the University of Texas in 1916 and entered the military service in 1917.

Colonel John E. Gordon

The Legion of Merit and the U. S. Typhus Commission Medal were recently awarded to Col. John E. Gordon, M. C., A. U. S., Boston. The citations were, in part, as follows: 1. As chief of the preventive medicine division, Office of the Surgeon, Headquarters, European Theater of Operations, his vigilant surveillance of all possible dangers from contagious and communicable diseases has been largely responsible for the singularly high standard of health in this theater. His effective supervision of all phases of preventive medicine facilitated the general efficiency of the Medical Department in its support of the personnel of the United States Army. 2. He rendered exceptionally meritorious service in the control of epidemic typhus in the American occupied region of Germany during the period from May 19 to July 7, 1945. His intelligent supervision of modern control methods checked the spread of typhus in the inner reich, protected the advancing American forces and prevented the dissemination of typhus with the return of repatriates into France. Dr. Gordon graduated from Rush Medical College of the University of Chicago in 1925 and entered the military service June 14, 1942.

Captain Harry Most

The Legion of Merit has been awarded to Capt. Harry Most, M. C., A. U. S., of New York, who rendered exceptionally meritorious service while serving as chief of malaria research, Kennedy General Hospital, and chief of tropical disease section, Moore General Hospital, from January 1944 to January 1946. The citation relates that his unusual knowledge of tropical diseases made his work a primary factor in the successful operation of the Tropical Disease Center. Captain Most's accomplishments in this field materially benefited the medical profession and were of extreme value to the Medical Department in this phase of its mission. Dr. Most graduated from New York University College of Medicine in 1931 and entered military service in January 1944.

Major Emil E. Merkel

The Bronze Star Medal has been awarded to Major Emil E. Merkel, M. C., A. U. S., of Los Angeles, because of the meritorious service he performed on May 2, 1942 on Corregidor, Philippine Islands. The details are given in the citation: When a mortar battery received a hit during a heavy hostile artillery concentration he ran to the position and, as the enemy barrage continued, administered first aid to the wounded men. Major Merkel's action, done without regard for his own safety, reflects great credit on himself and on the military service. Dr. Merkel graduated from the College of Medical Evangelists in 1940 and entered the military service Dec. 15, 1940.

Medical News

(PHYSICIANS WILL CONFER A FAVOR BY SENDING FOR THIS DEPARTMENT ITEMS OF NEWS OF MORE OR LESS GENERAL INTEREST: SUCH AS RELATE TO SOCIETY ACTIVITIES, NEW HOSPITALS, EDUCATION AND PUBLIC HEALTH.)

CALIFORNIA

Chiropractor Held in Fraud.—According to the San Francisco *Examiner* an asserted racket was exposed in January in an eleven count federal mail fraud indictment against chiropractor John A. Zanetti, 49. Zanetti is operator of the National Clinical Institute, 224 Rosenberg Building, Santa Rosa. Advertising a sure cure for arthritis, he solicited victims to send $1 for information as to how they could be cured, the indictment charged. Once the first application for information had been made, Zanetti mailed the prospect literature claiming to have discovered a "miraculous new cure" for arthritis, James T. Davis, assistant U. S. attorney, said. The cure could be obtained for $250. If the money was not forthcoming within a few days, follow-up letters with special reductions were sent. When the second payment had been received, Davis declared, Zanetti mailed printed instructions in which he described arthritis as a "nervous disorder" and set up a course of action which he said would result in a cure. Davis said the local postoffice inspector's office was swamped with complaints of those who had been mulcted.

Stanford University Establishes Eye Bank.—Officials of Stanford University announced March 7 the establishment of an eye bank, a community service organization dedicated to providing corneal material for eye graft operations. Located at Stanford University Hospital, San Francisco, the organization will bring to blind and partially blind West Coast residents the same opportunity for sight improvement available to Easterners through eye banks now operating in New York, Boston and Chicago. The principal function of the local eye bank is the collection, preservation and distribution of eyes to obtain corneal tissue. All qualified eye surgeons on the Pacific Coast will be invited to make use of the bank's facilities. The corneas collected and preserved by the eye bank are to be distributed without cost to either patient or surgeon, except for a small service fee to cover the cost of handling. Plans for expeditious transportation of the corneal tissue were made March 6 at a luncheon at which the Air Express, United Airlines, Railway Express and Greyhound Bus Lines promised full cooperation. The university was represented by Dean Chandler, Dr. Anthony J. J. Rourke, Stanford Hospital physician-superintendent, Drs. Max Fine and Dohrmann K. Pischel, eye surgeons, and Mrs. John W. Hartman, eye bank secretary. With this announcement university officials issued a call for registration of donors wishing to donate their eyes to the bank after death. Information on the procedure for registration of donors can be secured by telephoning WEst 1-8000, where twenty-four hour service is available, or by writing to the Stanford Eye Bank, 2398 Sacramento Street, San Francisco. Other objectives of the eye bank will be to promote interest in research aimed at developing successful methods of preserving corneal tissue for longer periods than are now possible and to encourage investigation leading to improved methods of corneal transplantation.

ILLINOIS

Mild Influenza.—An outbreak of mild influenza reached epidemic proportions in Illinois March 6, according to Dr. Jerome J. Sievers, head of the division of communicable disease of the state department of health. He added that the outbreak had started in the southern section of the state and spread rapidly.

Evanston Hospital to Expand.—The erection of an addition to Evanston Hospital, Evanston, estimated to cost $1,250,000 will begin in June as the first step in a $5,000,000 expansion program. Succeeding steps will be to replace with fireproof structures the maternity building, the children's building and the administration building; to add buildings for the care of tuberculosis, arthritis, poliomyelitis, eye, ear, nose and throat, psychiatric and psychosomatic, chronic and old age diseases and contagious diseases, and to provide additional general beds with equipment to handle the steadily increasing population of the north suburban area.

New Director of LaSalle County Sanatorium.—Dr. H. Vernon Madsen, Waterloo, Iowa, has assumed duties as medical director and executive of the LaSalle County Tuberculosis Sanatorium, Ottawa, replacing Dr. Loren L. Collins, who resigned September 1 to become medical director for a sanatorium in Madison County, Ill. Dr. Madsen, a graduate of the University of Iowa College of Medicine, has served on the staffs of state sanatoriums in Iowa, North Dakota and Indiana and was medical director of the Smith-Estab Memorial Hospital, Richmond, Ind. Before taking the Ottawa position he was engaged in private practice in chest diseases in Waterloo.

Chicago

The Wilder and Kretschmer Lectures.—The William Hamlin Wilder Memorial Lecture will be delivered May 23 at the Palmer House by Dr. John Q. Griffith Jr., Laboratory for the Study of Hypertension, Philadelphia, on "Rutin: A Therapy for the Hemorrhagic Complications of Hypertension." The sixth Edwin R. Kretschmer Memorial Lecture will be delivered April 25 at the Palmer House by Dr. Charles H. Watkins, Mayo Clinic, Rochester, Minn., on "Evaluation of Recent Drugs in the Control of Experimental and Human Leukemia."

Drive to Clean Up Restaurants.—On February 12 the president of the board of health, Dr. Herman N. Bundesen, began a drive to "close up every dirty eating and drinking place in Chicago" (THE JOURNAL, January 25, p. 255). Some twenty-eight additional food inspectors have been added to the staff; most of the restaurant owners are cooperating with the health department, and an ordinance which would conform closely to the model law proposed by the U. S. Public Health Service is being drafted. Some restaurants were temporarily closed by the city health department, including two in railroad stations, which were allowed to reopen after the insanitary conditions had been corrected. Seven additional restaurants were closed on March 13, including the one at the St. Claire Hotel, 162 East Ohio Street. The health department inspectors in reporting on the St. Claire had said that the kitchen floor, work benches and ice box were dirty, decaying food was on the counters, the meat slicers were dirty and the dish washer lacked required chlorine. Food in the refrigerators had water dripping on it from the ice compartment, and milk was standing unrefrigerated. When hotel officials had previously refused to obey a health department order to close until violations were corrected, Dr. Bundesen went to the hotel, personally closed it and had police assigned to the hotel to see that his order was obeyed. The other restaurants closed on the same date were Annes', 91 West Randolph Street, the Coney Island Lunchroom, 556 East Forty-Seventh Street and restaurants at 551 South State Steet, 75 West Van Buren Street, 245 East Thirty-Ninth Street and 4424 Broadway. Rickett's Restaurant at 105 East Chicago Avenue and the Fish and Chips, 72 East Randolph Street, were permitted to remain open because they had corrected previous violations, which were not of a major character. All these restaurants with the one exception closed of their own volition and will be permitted to reopen, as will the St. Claire's restaurant, when conditions are remedied. Twenty-six other eating places previously temporarily closed were found to have complied with rules and were allowed to reopen. Dr. Bundesen said that "fully 80 per cent of the restaurants and hotels have done a fine job. We will be forced to close the kitchens of those which do not comply." He stated that the spread of upper respiratory diseases may be aided by dirty dishes, insanitary handling, dirty lukewarm dishwater and insanitary conditions in the kitchens.

INDIANA

Brucellosis Survey.—The Indiana State Board of Health and Purdue University, with the cooperation of the U. S. Bureau of Animal Industry and the U. S. Public Health Service, is making a study of brucellosis in Indiana to determine the extent, location and distribution of undulant fever. In selected representative areas the size of townships, all farm people are given blood tests. At the same time samples are taken from all dairy cattle, horses and goats and of the breeding swine, cattle and sheep. Other groups of highly exposed individuals, workers in rendering and packing plants, are also being surveyed. The Bureau of Animal Industry has supplied personnel and a trailer laboratory to test animals. Blood tests are done by the state board of health laboratory in Indianapolis, and at Purdue effort is being made to isolate the organism. Cooperation of the people is gratifying. When half of Daviess County had been surveyed, about 1 per cent of both animals and human beings reacted to the test. Blood samples taken by county health officers, private physicians and state board of health personnel showed that 28 per cent of rendering plant workers showed various degrees of reactivity at the halfway point in the survey. In the one packing plant surveyed, 13.5 per cent of those tested gave a reaction. Laboratories in Indianapolis and Purdue have made 18 isolations from human blood; 61 per cent were of the abortus type, 22 per cent the suis type and 17 per cent the melitensis, or goat, type.

IOWA

State Medical Meeting at Des Moines.—The Iowa State Medical Society will hold its ninety-sixth annual session at Des Moines April 16-18 at the Hotel Fort Des Moines under the presidency of Dr. Robert L. Parker, Des Moines. Among the speakers at the Wednesday afternoon pediatric and obstetric symposium are:

Dr. Alexis F. Hartmann, St. Louis, Principles Governing the Choice and Parenteral Administration of Fluids.
Dr. Ralph A. Reis, Chicago, Diabetes in Pregnancy.
Dr. Ralph Luikart, Omaha, Obstetrics—Yesterday and Today.
Dr. John R. Schenken, Omaha, The Rh Factor.

Other speakers included in the general and special sessions on succeeding days are:

Dr. Charles W. Mayo, Rochester, Minn., Some Provocative Cases.
Dr. H. Harlan Crank, Topeka, Kan., Psychosomatic Medicine: General Considerations.
Dr. Arthur M. Culler, Columbus, Ohio, Hemorrhage in the Fundus.
Dr. Grandison D. Royston, St. Louis, Uterine Bleeding.
Dr. Joseph B. Vander Veer, Philadelphia, Principles of Digitalis Therapy and Comments on Various Preparations and Methods of Administration.
Dr. Isador S. Ravdin, Philadelphia, Some Problems of Biliary Tract Disease.
Dr. Robert L. Parker Jr., Rochester, Diagnosis of Congenital Cardiac Malformations for Which Surgery Is Indicated.

A symposium on poliomyelitis will be held Friday at 3 p. m. with Drs. Ralph K. Ghormley, Rochester; Gaylord W. Anderson, Minneapolis; Lee F. Hill, Des Moines, and Earl C. Elkins, Rochester, Minn., participating. The Medical and Surgical sections will meet Thursday and Friday afternoons, the Eye, Ear, Nose and Throat section all day Thursday, and the Pediatric section Thursday morning. The State Society of Iowa Medical Women and the American Medical Women's Association, Branch 19, will meet Wednesday, April 16. At the annual banquet April 17 Dr. George F. Lull, secretary and general manager of the American Medical Association, will be the speaker. Doctors with hobbies are invited to make arrangements for their exhibits by April 1 by writing the central office, 505 Bankers Trust Building, Des Moines.

MARYLAND

Social Medicine Lecture.—A public De Lamar lecture on "Teaching and Research in Social Medicine: An Account of the Oxford Experiment" was given March 4 by Sir John Ryle, Nuffield professor of social medicine, Oxford University, at Johns Hopkins University School of Hygiene and Public Health, Baltimore.

MICHIGAN

University Appointment.—M. Evans Maxfield, Ph.D., at present assistant professor of physiology at Mount Holyoke College, South Hadley, Mass., has been appointed to the staff of the department of pharmacology and therapeutics at Wayne University College of Medicine, Detroit.

Resigns to Enter Private Practice.—Dr. George A. Sherman, director of the state health department bureau of tuberculosis control since 1941, resigned to enter private practice March 1. Before joining the state health department staff he was director of the Oakland County Tuberculosis Sanatorium and an instructor at the University of Michigan.

MISSISSIPPI

Applications for Student Aid.—Applications for loans effective in September and October are being received by the State Medical Education Board, Jackson, for use of students interested in obtaining financial assistance under the medical education scholarship loan program recently set up (THE JOURNAL, February 1, p. 335). Mrs. Maria Voskamp, Jackson, is the executive secretary.

MISSOURI

Cancer Research.—Washington University, St. Louis, was one of twenty-one universities to receive grants for cancer research, it was announced by the National Advisory Council. The work will be supervised by Dr. Sherwood Moore, professor of radiology and head of the department, and a member of the advisory council; Arthur L. Hughes, D.Sc., consulting physicist to Mallinckrodt Institute of Radiology; Dr. Edward H. Reinhard, assistant professor of medicine and radiology, and Dr. Carl V. Moore, professor of medicine.

New Health Commissioner.—Dr. Cecil A. Z. Sharp, Joliet, Ill., health commissioner of Will County, Ill., has been appointed health commissioner of St. Louis County, Mo., effective April 1, replacing Dr. Ruth I. Allen, acting commissioner, who will return to her former duties as director of Maternal and Infant Hygiene. Dr. Sharp, a graduate of the University of Geneva, Switzerland, was in private practice before joining the staff of the Illinois Health Department. He received a degree of Master of Science in Public Health at the University of Michigan, 1938. In his new position he will also serve as assistant professor of public health and preventive medicine at the Washington University School of Medicine, St. Louis.

Annual State Medical Meeting.—The eighty-ninth annual session of the Missouri State Medical Association will be held March 30-April 2 at the municipal Auditorium and Hotel President in Kansas City under the presidency of Dr. Howard B. Goodrich, Hannibal. The council meeting March 30 at 4 p. m. will be followed by a dinner for secretaries and presidents of the county medical societies. The first general meeting Monday afternoon will be in part a discussion of the medical care of veterans. Among the speakers will be Dr. Robert M. Zollinger, Washington, D. C. Among the speakers at the general sessions will be Drs. Herman W. Johnson, Houston, Texas, "Uterine Ring Dystocia"; Arthur M. Olsen, Rochester, Minn., "Diagnosis and Treatment of Bronchial Lesions"; William A. Altemeier, Cincinnati, "Chemotherapy as Used in Surgical Conditions"; Donald R. Nichols, Rochester, Minn., "Chemotherapy as Used in Medical Conditions," and Garfield G. Duncan, Philadelphia, "Some Nutritional Pitfalls in General Hospitals."

There will be symposiums on poliomyelitis, chemotherapy, nutritional deficiencies and industrial health. Other features of the sessions will be motion pictures and scientific exhibits, and a banquet Monday night honoring past presidents. The Woman's Auxiliary will meet March 30-April 1 at the Hotel Muehlebach.

NEW JERSEY

Personal.—Dr. Abraham Z. Barhash, Newark, has been appointed director of the division of community clinics of the National Committee for Mental Hygiene, succeeding Dr. Milton E. Kirkpatrick, New Orleans. Dr. Barhash served in the army as a neuropsychiatrist.

Cancer Week.—The Passaic County Medical Society will have charge of the exhibits and motion pictures on the lay program for Cancer Week, April 1-5, at the Public Library, Paterson. Dr. Anthony J. Delario, Paterson, will give a talk at 7:30 p. m. on April 1; Dr. Jacob Roemer, Paterson, April 3; Dr. Andrew F. McBride Jr., Paterson, April 4, and Dr. John J. Szymanski, Passaic, April 5.

Lecture by Dr. Kennedy.—Dr. Foster Kennedy, professor of clinical medicine (neurology), Cornell University Medical College, New York City, addressed the reciprocity meeting of the Woman's Auxiliary to the Hudson County Medical Society, Jersey City, March 3, on "The Organic Background of Mind." Dr. Kennedy is also director of the neurologic department of Bellevue Hospital, New York City. He recently returned from the Pan American Medical Congress meeting in Cuba.

NEW YORK

Committee for Education on Alcoholism.—As a result of interest growing out of the work of Alcoholics Anonymous groups, a committee for education on alcoholism, consisting of physicians, members of the clergy, social workers, industrialists, law enforcement officers and others in Rochester, has been formed. The committee wishes to provide for medical care of chronic alcoholic addicts. Dr. G. Kirby Collier, Rochester, is honorary chairman of the committee.

Meeting of Diabetes Association.—The New York Diabetes Association, Inc., under the auspices of the committee on research, will hold an open meeting at 8:30 p. m., March 31, at the New York Academy of Medicine. "Recent Observations on Experimental Diabetes" by Dr. Francis D. W. Lukens, assistant professor of medicine and director of the George S. Cox Medical Research Institute, University of Pennsylvania, and "Insulin Requirement and Exercise" by Dr. Harold E. Himwich, chief, clinical research branch, medical division, Edgewood Arsenal in Maryland, make up the program. The discussion to follow will be opened by Dr. DeWitt Stetten Jr., department of biochemistry, Columbia University College of Physicians and Surgeons, New York.

New York City

Health Nursing Center Opened in Chinatown.—The Community Service Society opened a health nursing center at the Chinese Community Club, 24 Pell Street, February 27. The ultimate aim of the service work in Chinatown will be to add facilities for health examinations and to hold sessions in nutrition and the care of infants.

Sydenham Emergency Fund Raised.—The emergency fund to save Sydenham Hospital now totals $300,000 following a series of personal contributions and benefits. The hospital,

when confronted with the possibility of closing last November, made an appeal for $300,000 on Thanksgiving Day. Sydenham in 1943 was reorganized as an interracial voluntary hospital.

Positions for Psychiatrists Open.—Positions are available for 13 psychiatrists at the newly opened psychiatry pavilion of Kings County Hospital, Brooklyn, the salaries ranging from $3,650 to $6,000 a year, the New York City Department of Hospitals announces. When staffing is completed this facility will be a self-contained hospital promoting every aspect of up to date psychiatric diagnosis and treatment (THE JOURNAL, March 1, p. 637). The building includes complete x-ray and surgical setups with full laboratory facilities. Inquiries and applications should be addressed to Dr. Sam Parker, director of psychiatry, Kings County Hospital, Brooklyn 3.

Norway Withdraws Embargoed Sardines.—The Norwegian government has voluntarily agreed to withdraw 1,000 cases of Norwegian sardines embargoed by the New York City Health Department from the New York City market, Health Commissioner Israel Weinstein announced March 7. An investigation following an outbreak of 20 cases of mild food poisoning among New Yorkers (THE JOURNAL, January 4, p. 50) has been carried on by both the Norwegian government and the New York City Health Department. The investigation, Dr. Weinstein said, indicated that a very small number of cans had sprung leaks and allowed bacteria to get into the cans. A small percentage of aluminum cans were found with defective seams. In Norway the Norwegian canning industry, which is under sanitary supervision by the government, has instituted rigid control over seaming equipment and practices.

Scroll Commemorates Founding of A. M. A.—In recognition of the approaching centennial celebration a scroll commemorating the founding meeting of the American Medical Association was presented to Dr. Currier McEwen, dean of New York University's College of Medicine at the annual alumni day dinner of the college, February 21. More than 250 alumni of the College of Medicine attended. The scroll, commemorating the National Medical Convention of May 1846, was presented to Dean McEwen by Dr. Nathan B. Van Etten, New York City, Past President of the American Medical Association. The scroll was signed by Dr. Van Etten, Dr. William C. White, president of the Medical Society of the County of New York, and Dr. Hippolyte M. Wertheim, New York City, president of the College of Medicine Alumni Association. This year also marks the one hundredth anniversary of the formal association of the faculty of the New York University College of Medicine and Bellevue Hospital, Dean McEwen said in his speech of acceptance. In 1847 a permanent medical board was set up by the city to supervise medical care and teaching at the hospital. Included on the board were a number of the faculty members of New York University. This was the beginning of a relationship which has continued uninterruptedly and has grown to a point where the faculty of the college is now responsible for the care of more than three fourths of the patients at Bellevue Hospital, the dean said. In conjunction with the dinner and other Alumni activities, Dr. Claude E. Heaton, College of Medicine faculty member, opened an exhibit of one hundred years of medicine in New York. Chancellor Harry W. Chase of New York University was a speaker at the dinner, as were Homer W. Smith, Sc.D., professor of physiology at the college, and Dr. Wertheim.

OHIO

University News.—Extensive preparations for a fund raising campaign in behalf of the University of Cincinnati College of Medicine were announced late in February by Dr. Eslie Asbury, Cincinnati, general chairman of the committee of local physicians and surgeons. Funds are sought for strengthening and enlarging the department for earlier years of medical training to keep the school at its present professional level.

PENNSYLVANIA

Society News.—At a joint meeting of the Reading Eye, Ear, Nose and Throat Society and the Diplomates Association of Berks County physicians, February 19, Dr. Eugene P. Pendergrass, Philadelphia, gave an address on "Atomic Energy in Medicine."

Charles Hatfield Honored.—Dr. Charles J. Hatfield, associate director and chairman of the board of trustees of Henry Phipps Institute for the Study, Treatment and Prevention of Tuberculosis, Philadelphia, was honored at an informal tea January 30 on the occasion of his eightieth birthday. The group in attendance represented the institute, the Pennsylvania Tuberculosis Society, the Philadelphia Tuberculosis and Health Association and other friends. In the absence of Dr. Esmond R. Long, director of the institute, because of illness, Dr. Frank A. Craig of the institute presided. Dr. Hatfield was presented two bound volumes of letters from friends, who took this means to pay tribute to him for his more than forty years of work and leadership in the tuberculosis control movement in Pennsylvania and throughout the country. He has also served twenty-five years as trustee for the University of Pennsylvania.

Philadelphia

Woman's Auxiliary Aids Student Loan Fund.—The Woman's Auxiliary to the Philadelphia County Medical Society has prepared and published "A Cook Book for Hungry Doctors," the income from which will go to the Corinna Keen Freeman Student Loan Fund and for other benevolent purposes. Here are the favorite recipes of some of Philadelphia's most distinguished physicians. The book is beautifully prepared and cleverly illustrated. Copies may be obtained by writing to the chairman, Mrs. Hugh Robertson, Twenty-First and Spruce streets.

TENNESSEE

Degree Granted in Medical Technology.—The University of Tennessee College of Medicine, Memphis, granted its first certificate in medical technology last December. Students entering the course with two years' previous college training will receive a certificate after fifteen months' additional work in technology, while those entering with three years' previous college training will receive a B.S. degree in addition to the certificate. Dr. Douglas H. Sprunt, Memphis, reports numerous requests from doctors and hospitals for technologists.

TEXAS

University News.—Chauncey D. Leake, Ph.D., vice president of the University of Texas, Galveston, delivered the William Snow Miller Lecture, "Letheon: The Cadenced Story of Anesthesia," March 18, in the auditorium of the university. The lecture was prepared as a tribute to the centennial of ether and chloroform anesthesia and was sponsored by the Phi Beta Pi fraternity.

Grant for Memorial Lectureship.—A five year grant of $2,500 to Southwestern Medical College, Dallas, for the establishment of the Charles P. Guerriero Sr. Memorial Lectureship in Obstetrics and Gynecology has been received. The fund is a gift of Dr. William F., Dallas, and George W. Guerriero, Monroe, La., in memory of their father. The lectures will be open to physicians, medical students, nurses and interested persons in allied professions.

WASHINGTON

Dr. Pullen Named Director of Hospital Planning.—The appointment of Dr. Roscoe L. Pullen, New Orleans, as associate professor of medicine and director of hospital planning at the new University of Washington Medical School, Seattle, was recently announced by Dr. Edward L. Turner, dean of the school. Dr. Pullen graduated at Northwestern University Medical School, Chicago. Before coming to Seattle Dr. Pullen was assistant director of the Charity Hospital of Louisiana, New Orleans.

WEST VIRGINIA

Superintendent Appointed.—Dr. Philip Johnson, Fairmont, has been appointed superintendent of Fairmont Emergency Hospital to succeed Dr. Chesney M. Ramage, who resigned, effective January 1. The appointment was made by Governor Clarence W. Meadows. Dr. Johnson served in the medical corps with the rank of major during World War II, being assigned to a hospital in France for over a year.

Personal.—Dr. Newman H. Dyer, Charleston, state health commissioner, has been appointed a member of the governing council of the southern branch of the American Public Health Association.——Dr. Andrew P. Sackett, medical officer in charge of Kanawha Valley Medical Center (VD), South Charleston, has been appointed acting director of the bureau of venereal disease control in the state health department. Dr. Sackett will continue as medical officer in charge of the rapid treatment center in South Charleston.

WISCONSIN

Industrial Clinics.—Industrial medical inplant clinics scheduled for Racine April 8, Fort Atkinson April 9 and Green Bay April 10 are being presented by the council on scientific work of the State Medical Society of Wisconsin in cooperation with the committee on industrial health of the Wisconsin State Medical Society and the industrial hygiene unit of the state

board of health. Subjects to be discussed at Racine are exposures of hot metals, heavy machinery, dust, fumes, solvents and eye injuries; at Fort Atkinson, exposures of foundry paints, handling of sheet metals and eye injuries, and at Green Bay, exposures of rollers, damp working conditions, chemical solvents and eye injuries.

GENERAL

Swiss Red Cross Chief Resigns.—Max Huber, Swiss acting president of the International Committee of the Red Cross, has resigned, according to the New York *Times*. Ernest Bloer and Martin Bedmer have been appointed to undertake the president's duties for this year.

Special Society Elections.—At the recent first annual meeting of the Southern Society for Clinical Research, New Orleans, Dr. Tinsley R. Harrison, Dallas, Texas, was elected president; Dr. William J. Darby Jr., Nashville, Tenn., vice president, and Dr. Thomas Findley, New Orleans, secretary and treasurer.

Research on Pollen Extracts.—Through a grant of $1,500 for research on the standardization and purification of pollen extracts from Marcelle Cosmetics, Inc., Chicago, the American College of Allergists will continue the studies started over a year ago by its standardization committee. These studies will be under the direction of Morris Scherago, D.V.M., head of the department of bacteriology of the University of Kentucky.

Psychiatric Foundation Formed.—Under the sponsorship of the American Psychiatric Association and the American Neurological Society, a Psychiatric Foundation has been formed to train psychiatrists, psychiatric nurses, psychiatric social workers, psychologists, occupational therapists and allied workers. It also will establish a program of research into causes and cures of mental diseases, take the lead in modernizing and broadening existing laws related to psychiatry and give special emphasis to the development of child psychiatry.

International Medical Congresses.—On March 7 a preparatory conference was held in Unesco-House, Paris, for the creation of a permanent bureau of international medical congresses. It was attended by the presidents or delegates of seventeen international medical congresses and associations, together with representatives of the World Medical Organization. The creation of a permanent bureau to encourage and develop international congresses in the medical sciences was considered.

Psychiatric Clinics for Children.—The American Association of Psychiatric Clinics for Children had at the beginning of this year twenty-nine member clinics and four associate member clinics. The association, founded last November, is designed to act in an advisory capacity to the National Committee for Mental Hygiene. The officers of the association are Drs. Frederick H. Allen, Philadelphia, president; Harry M. Little, Pittsburgh, vice president, and Frederick Rosenheim, Boston, secretary-treasurer.

Campaign to Combat Multiple Sclerosis.—At a meeting of neurologists of the United States and Canada at the Academy of Medicine, New York, February 21, a campaign to combat multiple sclerosis was inaugurated. According to Dr. Tracy J. Putnam, New York City, honorary chairman of the newly organized Association for the Advancement of Research in Multiple Sclerosis (THE JOURNAL, Oct. 19, 1946, p. 402), this is the first time that leading neurologists have directed attention on a national basis to a crippling disease which attacks men and women during the most useful periods of their lives.

Awards for Research.—Dr. Irving S. Wright, New York Hospital, New York City, and the College of Veterinary Medicine, University of Illinois, Chicago, are the recipients of two research grants recently made by Sharp and Dohme, Inc., Philadelphia. The grant to Dr. Wright will partially support research he has initiated on peripheral vascular diseases, particularly thrombosis. The University of Illinois grant will afford increased support to a research program under the direction of Dean Robert Graham and associates on the value of various sulfonamides in the treatment of diseases of livestock and poultry.

Pediatricians Appoint Liaison Officer.—Dr. George F. Munns, Winnetka, Ill., was recently appointed by the board of the American Academy of Pediatrics as liaison officer between the academy and the National Society for Crippled Children and Adults. Dr. Munns, who will counsel the society in its nationwide program, is a clinical instructor in pediatrics at Northwestern University, a member of the Chicago Pediatric Society and of the Society for Research in Child Development and associate attending physician at Children's Memorial Hospital, Chicago. He received his M.D degree at the University of Cincinnati.

Book Center for War Devastated Libraries.—The American Book Center for War Devastated Libraries has been urged to continue meeting the need for American publications at least through 1947. The book center is therefore making a renewed appeal for American books and periodicals, for technical and scholarly books and periodicals in all fields and particularly for publications of the past ten years. The generous support which has been given to the Book Center has made it possible to ship more than 700,000 volumes abroad in the past year. It is hoped to double this amount before the book center closes. Books and periodicals which can be spared are urgently needed and will help in the reconstruction which must preface world understanding and peace. Ship contributions to the American Book Center, % the Library of Congress, Washington 25, D. C., freight prepaid, or write to the center for further information.

Wendell Stanley to Receive Chemist's Medal.—The award of its 1947 Willard Gibbs medal to Wendell M. Stanley, Ph.D., Rockefeller Institute for Medical Research, Princeton, N. J., and Nobel Prize winner in chemistry last year, was announced by the Chicago section of the American Chemical Society March 8. The medal goes to Dr. Stanley in recognition of his discoveries in the chemistry of viruses. The award will be presented at a meeting of the Chicago section May 23. Dr. Stanley received his Ph.D. from the University of Illinois in 1929 and his Sc.D. from Harvard University in 1938. Other honors he has won include the American Association for the Advancement of Science prize in 1936, the Rosenberger Medal, University of Chicago, in 1938, the Adler Prize from Harvard in 1938 and the gold medal of the American Institute in 1941. Dr. Stanley spoke at a meeting of the University of Illinois section of the American Chemical Society at Urbana February 20 on the influence of vaccine on influenza.

FOREIGN

Awarded Albert Medal.—Sir Alexander Fleming, University of London, and Sir Howard W. Florey, Oxford University, jointly received the Albert Medal of the Royal Society of Arts this year for their services in the discovery and development of penicillin. It was handed to them privately by Viscount Bennett, president of the society.

Smallpox Epidemic.—The Burmese government, to halt a smallpox epidemic at Rangoon, began this week to evacuate 100,000 refugees who came to Rangoon to escape rural robber bands, the Associated Press reports. The smallpox death rate has risen to 30 per cent of reported cases. The minister of social service said that 30,000 mat huts will be torn down and the refugees moved to a settlement outside the city.

Marriages

WILLIAM J. BORGSMILLER, Murphysboro, Ill., to Miss June Christine Knox of Wetmore, Mich., in Chicago Dec. 21, 1946.

WILLIAM CHAPMAN BUTZ, Darlington, Wis., to Miss Christine Frances Westbrook in Ancon, Canal Zone, recently.

DUANE MONTGOMERY KLINE JR., Baxter Springs, Kan., to Miss Joanna Gleed Wagstaff of Lawrence, Kan., in October.

FREDERICK WARD ALLEN JR., Rutherford, N. J., to Miss Gloria Lillian Immenhausen of Chicago, Aug. 31, 1946.

CYRIL EUSTACE BOUSFIELD, Woolwich, Maine, to Mrs. Sarah Bagley Wright at Arlington, Mass., January 1.

LAUREN OSBORNE GIBSON, Statesville, N. C., to Mrs. Ruth Whitten of Hillsboro, Ill., Dec. 27, 1946.

FRANK REECE WRENN JR. to Miss Martha Elizabeth Sullivan, both of Anderson, S. C., Dec. 19, 1946.

ROBERT J. MUENCH, Des Plaines, Ill., to Miss Florence L. Alexander in Melrose Park November 3.

THOMAS J. MCKEAN, Montpelier, Ind., to Mrs. Grace Nordman of Cairo, Ill., November 7.

ROBERT ASHLEY HALL, Paintsville, Ky., to Miss Helen Lee Mayo in Louisville, Dec. 21, 1946.

NORTON S. BROWN to Miss Ilka Chase, both of New York, in Las Vegas, Nev., recently.

RICHARD A. BETTS and Miss Aileen Boutin, both of Spokane, Wash., Dec. 21, 1946.

Deaths

Harry Plotz, consultant to the Secretary of War and during the war chief, division of virus and rickettsial diseases at the Army Medical School in Washington, D. C., died in the Walter Reed General Hospital January 6, aged 56, of old and recent occlusions of the coronary arteries with infarcts of the heart. Dr. Plotz was born in Paterson, N. J., on April 18, 1890. He received his medical degree from the Columbia University College of Physicians and Surgeons in New York in 1913 and interned at Mount Sinai Hospital in New York. When World War I began he went to Siberia with the Red Cross Typhus Commission to help fight an epidemic and worked there until 1916, when he became an adviser to the Surgeon General in Washington on problems of sanitation. He invented an army delouser and he fought typhus in Poland and Russia after the war. During World War I he attained the rank of lieutenant colonel. In 1921 Dr. Plotz became associated with the Pasteur Institute in Paris as director of laboratories and was the first American to be named to its permanent staff. His work on measles was exceptional and he collaborated in developing a technic which made possible the mass production of a vaccine against typhus fever of the European type. In 1940 he joined the Harvard University laboratory as a visiting physician and in the following year reentered the Army of the United States as one of the original members appointed by the President to serve on the United States Army Typhus Commission, retiring one year ago with the rank of colonel. While at the Army Medical Center in Washington he established the virus and rickettsial section of the Army Medical School. He was a trustee of the Ella Sachs Plotz Foundation for the Advancement of Medicine, which was founded in memory of his wife, who died in 1922. Dr. Plotz was an officer of the Legion of Honor and held the Legion of Merit, the Typhus Commission Award and several Serbian and Bulgarian decorations. He was a member of the Association of Immunology, the Society for Experimental Biology and Medicine, the Harvey Society and other scientific organizations.

Sidney Mainer Lister ✠ Houston, Texas; born in Colita, Texas, Nov. 13, 1875; Barnes Medical College, St. Louis, 1898; fellow of the American College of Surgeons; past president of the Harris County Medical Society; an examining physician for Selective Service during World wars I and II; member of the city and state boards of health and for many years on the state prison board; vice president and director of the Gibralter Building and Loan Association; one of the founders and twice served as head of the Jefferson Davis Hospital; served as chief of the staff of the Memorial Hospital, where in 1940 he was awarded a medal for thirty-two years of service on the staff and where he died Nov. 16, 1946, aged 71, of arteriosclerotic heart disease.

Samuel Alexander Thompson ✠ Camden, Ark.; born in Glenville, Ark., in 1889; University of Arkansas School of Medicine, Little Rock, 1914; past president of the Ouachita County Medical Society and the Fifth Councilor District Medical Society; for many years chairman of the state maternal and welfare committee of the Arkansas Medical Society; member of the executive board of the Arkansas Association for the Crippled; served as chief medical examiner for the Ouachita Selective Service Board during World War II and on the advisory committee of the Children's Bureau in Washington, D. C.; past president of the Lions Club; member of the chamber of commerce; died in Little Rock Nov. 24, 1946, aged 57, of glioblastoma.

Luke B. Stephens, Paris, Texas; Baylor University College of Medicine, Dallas, 1905; member of the American Medical Association, Fourteenth District Medical Society and the Texas Oto-Laryngological Society; for many years a member of the school board; past president of the Lamar County Medical Society; veteran of the Spanish-American War and World War I; during World War II was a member of the Texas Defense Guard and served on the local Selective Service Board; on the visiting staffs of St. Joseph's and Lamar hospitals; died while on a deer hunting trip near Llano Nov. 18, 1946, aged 70, of coronary heart disease.

Max Brav, Dayton, Ohio; National Medical University, Chicago, 1906; died in the Miami Valley Hospital Nov. 13, 1946, aged 67.

William Howard Carpenter ✠ Woodbury, N. J.; University of Pennsylvania Department of Medicine, Philadelphia, 1892; served during World War I; for many years medical director of the Girard Life Insurance Company of Philadelphia and medical examiner for many insurance companies; formerly director of the Salem (N. J.) National Bank and Trust Company; died in the Underwood Hospital Dec. 15, 1946, aged 75, of carcinoma of the prostate.

William Oscar Clarke, Hibbing, Minn.; University of Minnesota Medical School, Minneapolis, 1938; served a rotating internship at the Minneapolis General Hospital and a residency in internal medicine at the University Hospitals, where he had been a teaching fellow in internal medicine; served in the medical corps of the Army of the United States during World War II; died at Rawah Ranch, Glendevey, Colo., June 17, 1946, aged 36, of coronary occlusion.

Charles G. Cook, Weimar, Texas; Medical Department of Tulane University of Louisiana, New Orleans, 1897; member of the American Medical Association; past president and secretary of the Colorado County Medical Society; veteran of the Spanish-American War; school trustee and city health officer; died Nov. 6, 1946, aged 71 of cerebral hemorrhage.

Herbert Jones Erwin, Gastonia, N. C.; Leonard Medical School, Raleigh, 1908; affiliated with the Gaston County Negro Hospital; died Dec. 29, 1946, aged 67, of congestive heart failure.

Richard Bland Ford, Corpus Christi, Texas; University of Oklahoma School of Medicine, Oklahoma City, 1928; member of the Oklahoma State Medical Association; served in the medical corps of the U. S. Naval Reserve during World War II; died Nov. 30, 1946, aged 45.

Isabelle Parker Gibby, Brighton, Mass.; Boston University School of Medicine, 1893; died Nov. 22, 1946, of arteriosclerotic heart disease.

Jacob Casper Hutzelman ✠ Glendale, Ohio; Ohio-Miami Medical College of the University of Cincinnati, 1913; served on the staff of the Mercy Hospital in Hamilton; died Dec. 12, 1946, aged 63, of heart disease.

Irvin Arthur Ihrke, Oshkosh, Wis.; Rush Medical College, Chicago, 1934; member of the American Medical Association; interned at Oak Park (Ill.) Hospital; formerly city physician; served in the medical corps, Army of the United States, overseas during World War II; died Dec. 4, 1946, aged 41, of bronchopneumonia.

John Roland Lynn ✠ Hazen, Ark.; Memphis (Tenn.) Hospital Medical College, 1887; honorary member of the Arkansas Medical Society; served as president of the Prairie County Medical Society; surgeon for the Rock Island Railway; formerly member of the state and county boards of health; city health officer; died Dec. 2, 1946, aged 79, of heart disease.

Howard Albert Mahaffey, Hillsboro, Texas; University of Louisville (Ky.) Medical Department, 1903; member of the American Medical Association; past president of the Hill County Medical Society; county health officer for many years; local physician for the Missouri, Kansas and Texas Railroad for many years; examining physician for Selective Service in Hill County during World War II; died in Fort Worth Nov. 3, 1946, aged 72, of bronchogenic carcinoma of the right lung.

Frederick M. Mullino, Montezuma, Ga.; Southern Medical College, Atlanta, 1892; past president of the Macon County Medical Society; died in the Macon County Clinic Dec. 12, 1946, aged 79, of injuries received in an automobile accident.

Leonard Albert Myers ✠ Houston, Texas; University of Oklahoma School of Medicine, Oklahoma City, 1922; member of the Texas Radiological Society and the Radiological Society of North America; on the staff of the Memorial Hospital; died Nov. 29, 1946, aged 50, of coronary thrombosis.

Edward Rodgers Neeper ✠ Colorado Springs, Colo.; Keokuk (Iowa) Medical College, 1891; member of the American Academy of Ophthalmology and Otolaryngology; on the staff of the Glockner Sanatorium and Hospital; died Nov. 21, 1946, aged 79, of uremia.

Arthur John Nugent, Worcester, Mass.; Maryland Medical College, Baltimore, 1908; died Nov. 21, 1946, aged 66, of cerebral hemorrhage.

Arthur Lloyd Parks ✠ Rome, Pa.; University Medical College of Kansas City, Mo., 1910; past president of the Bradford County Medical Society; served as mayor of Rome, U. S. pension examiner, health officer, state school inspector and examiner for the Veterans Administration; died Dec. 13, 1946, aged 63, of aneurysm of the aorta.

Edward Andrew Weir, Portland, Ore.; Harvard Medical School, Boston, 1893; formerly associated with the U. S. Public Health Service; died in the Veterans Administration Hospital, Roseburg, Nov. 4, 1946, aged 79, of acute ventricular failure.

Foreign Letters

LONDON

(From Our Regular Correspondent)

Feb. 15, 1947.

No Medical Journals

The prolonged spell of arctic weather has produced a dangerous reduction of accumulated supplies of coal, which in turn has led to cuts in the supply of electricity and to the restriction of the production of newspapers which require electric power. Excepting daily and certain weekly newspapers dealing with general current news of a particular locality, all newspapers must cease publication from February 17 for a minimum period of two weeks. This restriction covers all the technical journals, including the medical. Thus the *British Medical Journal* and the *Lancet* announce that they do not expect to be able to publish in the next two weeks. The *British Medical Journal* states that on May 10, 1941 the *Journal's* printers were destroyed by German bombs but production was uninterrupted. The *Lancet* recalls that the general strike of 1926 reduced its weekly issue to a single sheet. But never before has the reading medical public been faced with the total suppression of issues. The only new element in the situation is a socialist government. But for the government it is argued that to make political capital out of a natural phenomenon—the prolonged arctic spell—is not fair. But this reply does not meet the criticism that the government should have in time built up a coal reserve for the bad weather always a possibility at this time of year. Instead it gambled on its absence. Further, there is the criticism that giving way to ever repeated demands of the unions for higher wages, characteristic of the socialist government, without ensuring greater output, has made coal a much more expensive item for the private consumer as well as for industry. If increased efficiency kept pace with increased wages, increased cost would not have followed. Government tampering with the coal industry began in the war, since which coal has doubled in price. Socialism can easily enact higher wages but never seems to ensure increased efficiency. That is not what the unions want, though they pretend that increased wages make for greater efficiency. In regard to production, the one thing the unions have always stood for is limitation of output. Government spokesmen tell the workers that whatever justification there may have been in the past for limitation of output, that need has now passed and every one should do his best. They are even reduced to imploring workers to do so, the only method—an ineffectual one—left after abolishing the competition of private enterprise and guaranteeing work to all regardless of how they perform it. The British public will learn soon more of the ill results of a system which removes all incentive to work well.

Negotiations With the Minister on the Health Service

As stated in a previous letter, the British Medical Association has decided to negotiate with the minister of health as to the best possible health service provided such discussions are comprehensive in their scope and the possibility that they may lead to further legislation is not excluded. After these discussions it is proposed to take a second plebiscite of the profession on the issue of entering the service. The *British Medical Journal* considers it highly gratifying that the representatives of the constituent bodies at the last meeting, at which representatives of the three Royal Colleges were present, had the wisdom to sink their differences by accepting the terms of the minister's invitation. It is noteworthy that his attitude is very different from his earlier one, when he declined to negotiate on important matters. He has climbed down from his autocratic position. Incidentally it may be pointed out that we are back to the characteristically English method of settling everything by compromise.

Central Health Council for National Health Service

The minister of health, Mr. Aneurin Bevan, has written to various organizations asking them to submit the names of suitable candidates for membership of the Central Health Council which he has to appoint under the National Health Service Act. The act provides that there shall be forty-one members of the council, of whom six shall be ex officio. The council is to include fifteen medical practitioners, of whom two must have knowledge of mental illness, five laymen with experience of hospital management, five laymen with experience in local government, three dental practitioners, two experts in mental health services, two registered nurses, one certified midwife and two registered pharmacists.

The British Journal of Nutrition

The cessation of the war has been followed by the publication of a number of new medical journals. The latest is the *British Journal of Nutrition*, a quarterly of which the first number is to appear in the first half of the year. It is not entirely new, for it will replace under the same auspices the *Proceedings of the Nutrition Society*. The chairman of the editorial board is Dr. S. K. Kon of the National Institute for Research in Dairying.

ITALY

(From Our Regular Correspondent)

Feb. 1, 1947.

Age Limits for University Professors

Italian university professors are required to give up teaching at the completion of the seventieth year of age. The secretary (minister) of public education proposed to the council of ministers that the age limit for university professors should be extended to the seventy-fifth year, since several university faculties and various councils of the association of the university professors have voted in favor of such prolongation. Many of the present day professors started their career when, according to the law, the age limit was still 75. It seems only fair that the same treatment should be granted to all, since the age limit has actually been extended for those professors who after having been removed from their teaching positions on political or racial grounds have now resumed teaching. The majority of professors are well fit for praiseworthy service up to the seventy-fifth year of age and their removal is to be considered as an undeserved "diminutio." One must also take into account that the masters may be forced to abandon prematurely the pupils of their school, who only could reach their final goal, i. e. university teaching assignment, by continuing their studies under the tutorship of their teachers for additional years. The economic reasons are the strongest, since the university professors who would go into retirement could not support themselves according to their standards on their pensions. Some faculties have expressed the opinion that the age limit should not be prolonged in order that the pensions may be conveniently increased, and that as a reward for the grant of higher pensions the retiring professors should be bound to hold conferences at the university and some courses so that the pupils should not be deprived of the aid of their masters. Other university faculties have abstained from voting for the proposal of restoring the age limit to the seventy-fifth year. The council of ministers has not yet come to a definite conclusion because of the divided opinions but has found a temporary solution by renewing for one year the teaching assignment of those professors who have completed their seventieth year.

Campaign Against Tuberculosis

The considerable increase in mortality from tuberculosis in Italy as a result of the war is receiving the attention of responsible circles concerned with the campaign against tuberculosis. The executive committee of the Italian Federation Against Tuberculosis held a meeting in Rome to examine the various antituberculosis institutions and see what may be

expected from the support which the parliamentary medical group may give to the reform of the antituberculous organizations. The council decided that the first national congress for the campaign against tuberculosis should be held in Milan next year to celebrate the hundredth anniversary of Carlo Forlanini.

The regional antituberculosis association Lazio-Umbria also had a meeting at the Institute Carlo Forlanini in Rome with about thirty physicians and numerous officials attending. Professor Omodei-Zorini, director of the institute, read a paper on extrapleural pneumothorax, which is based on the biophysiologic concepts of Forlanini and which represents a form of treatment midway between intrapleural pneumothorax and thoracoplasty. The problems which result from the use of this method are the object of studies by Italian phthisiologists. Based on scientific and clinical proof, Professor Omodei-Zorini examined all the aspects of the new therapy and outlined the fundamental criteria and the clinical indications for extrapleural pneumothorax.

Professor Carlo Cattaneo reported on modern chemotherapy in the field of tuberculosis. In the discussion of Cattaneo's report action was agreed on against those who were publishing miraculous notes in the field of antituberculous therapy. Professor Nello Montanini reported on the formation of interbronchial anastomosis and presented a new concept of the pulmonary circulation of the air which was based on the results of a personal study.

A center of applied psychology was inaugurated at the Forlanini Institute for the rehabilitation of those who have been discharged from sanatoriums and for facilitating the readjustment to work in every field by ensuring postsanatorium care for them. The inaugurating ceremony was attended by Hon. Dr. Gasperi, president of the Council of Ministers, who expressed the interest of the government in the problem.

Congress of Psychoanalysts

The first congress of Italian psychoanalysts was held in Rome. Professor Servadio paid tribute to Sigmund Freud. Papers then were read by a number of investigators.

Flescher, who many times previously had applied the method of psychoanalytic research to the phenomena of politics, reported a study on mass psychology. In contrast to Freud, who believed that sublimated erotic causes may be considered as the main motive which induces the individual to gregariousness, the speaker attributed this phenomenon rather to fear and to the need for protection. The projection of the superego, in the figure of the leader, a phenomenon which causes a moral involution of the masses returning to an infantile phase, may be considered as a consecutive phenomenon. Next to the moral regression of the masses due to the phenomenon of collectivization, Flescher furnished evidence of the moral involution which is frequently due to methods used by their leaders, who are the symbols of the individual superego.

Perotti analyzed several patients who presented anguish and fear of Communism; he observed that in reality these patients were afraid of the annihilation of their proper ego in front of the feared irruption of the sexual and aggressive instincts, i. e. of the id.

Di Palma spoke on psychoanalytic technics; he suggested that in the diagnosis of mental infirmity which is accessible to psychotherapy (as an example, the obsessional neuroses, the hysteric phobia) one should differentiate the neuroses of transfer from the disturbances of character due to lesions of the superego during childhood. Pardi discussed the relationship between psychoanalysis and the study of the behavior of animals.

Servadio discussed revision of the concept of the Oedipus complex; in his opinion and in that of many other psychoanalysts, this concept should be modified and extended to object relationship also in earliest infancy.

Merloni discussed the affective bases of punishment and of the psychology of judges. The judges, who are bound to pass an objective and rational sentence on the defendant, may often act under the impulse of the irrational instincts which determine the feeling of punishment in other human beings, i. e. vengeance against the one who offends society and expiation on the part of one who allows the irruption of the instincts of the id. The speaker is convinced that conscience can not be gained from irrational motives which are based actually on punishment and that true justice cannot result from this type of psychology of the judge.

Health Referendum

The high commissioner for public health has named a committee for the study of health reforms in Italy, and three representatives of the medical parliamentary group are members of this committee. Prior to the advancement of concrete proposals for modification of the health law the medical parliamentary group submitted a referendum to all Italian physicians on the principal problems of a health character. The items to be considered are health reorganization of the state; reform of medical studies according to medical progress and the health needs of the country; reports of the medical profession and of the mayoralties; reports of clinics and of hospitals; charity funds; mutual insurance; the duties of the physician employed by the community to give medical assistance gratuitously to the poor; pensions of health personnel; occupational diseases; social diseases; problems of maternity and of infants; medical specialties; the auxiliary arts of medicine; various problems.

BRAZIL

(From Our Regular Correspondent)

SÃO PAULO, Feb. 16, 1947.

Anesthesia in Cesarean Section

A review of 559 cases of anesthesia in cesarean sections performed in the obstetric ward of the University of São Paulo Faculty of Medicine was made by Drs. B. Neme and Jutahy Esteves of the service of Professor Raul Briquet. Spinal anesthesia was used in 74.9 per cent, inhalation in 16.8 per cent, peridural in 2.9 per cent, sacral in 0.5 per cent and intravenous in 0.3 per cent. Pointing out the depressive action of analgesic drugs and anesthetic gases, Drs. Neme and Jutahy stated that a higher incidence of resuscitation is encountered after inhalation anesthesia than after spinal block, 15:6, in spite of a larger number of serious cases included in this group. To reduce immediate accidents and complications, the death rate (0.71 per cent) and hypotensive states (2.3 per cent) spinal anesthesia should be administered only by the trained anesthetist. Complementary anesthesia was necessary in 6.9 per cent of spinal, 15.3 per cent of epidural, 31.2 per cent of local and 100 per cent of venous anesthesias. According to Drs. Neme and Jutahy the danger of spinal block is highly overrated, as it was used in the hypertensive syndrome (65.4 per cent), placenta previa (66⅔ per cent), abruptio placentae (47.6 per cent) and heart trouble (42.8 per cent). However, spinal block is no longer used in hypertensive conditions or in toxic abruptio placenta. In the obstetric clinic where these figures were obtained spinal block is favored, providing good uterine retraction, excellent abdominal relaxation and almost complete atoxicity in addition to being harmless to mother and child.

The Clinical Forms of Amebiasis

Drs. F. Cintra do Prado and F. Figliolini, professors of the Escola Paulista de Medicina, São Paulo, describe the clinical forms of amebiasis and point out their respective frequency, based on 500 cases. The acute dysenteric form represented the beginning of amebiasis in only 15 per cent of the cases. In the remaining 85 per cent the illness developed in a slow and insidious manner; when the patients started attending the clinic

the amebiasis had already become chronic, and it was often impossible to determine the exact time it began.

They divided the chronic forms of amebiasis into intestinal (80 per cent), paraintestinal (10 per cent) and mixed (10 per cent). They found that in the intestinal forms the clinical characteristics were obstipation (50 per cent of the patients), diarrhea (25 per cent), chronic dysentery (10 per cent) or periodic dysentery (15 per cent). In the paraintestinal chronic forms certain symptoms surpassed in importance the complaints concerning the intestine; in this group of patients a predominance of hepatobilious symptoms (50 per cent) or of psychoneurotic reactions (30 per cent) or of nutritive disturbances (20 per cent) was observed. The symptomatology was complex, without any predominance of intestinal or paraintestinal characteristics, in the mixed forms.

Curare

Drs. João S. Campos and Oswaldo V. Brazil report the use of curare and a curare substitute, bebeerine dimethylether methochloride, in the prevention of traumatic complications in convulsive shock therapy and in the treatment of spastic syndromes. Both the curare used and the bebeerine derivative showed a pure curarizing action. Side effects (such as cephalalgia, blood pressure depression and bronchial spasm) evoked by some curares and curarine were absent. Electrocardiograms were not altered of 4 patients during curarization with bebeerine dimethylether methochloride. For excessive curarization the authors suggest the intravenous injection of neostigmine. Thirty patients were given 239 shocks (electrical and metrazol shocks) with preliminary curarization as convulsive agents. Traumatic complications were not observed. Muscular pains were also prevented.

Drs. Campos and Brazil also found that rigidity and contractures from pyramidal and extrapyramidal syndromes could be removed or attenuated by curare or the bebeerine derivative in doses that did not prevent voluntary motility. Their action was of short duration (two or three hours), but in some cases improvement in the spasticity was still present twenty-four to forty-eight hours later.

Bebeerine dimethylether methochloride was used with good results in 2 cases of tetanus. The trismus, opistotonos and convulsive seizures could be suppressed; a two or three hour period of muscular relaxation followed the injection of the bebeerine derivative. Bennett's opinion that curare therapy offers more possibilities than sedative therapy in controlling tetanic convulsion is shared by Drs. Campos and Brazil.

The authors discuss the advantages resulting from the use of a chemically defined and strongly curarizing compound, bebeerine dimethylether methochloride, instead of curare, a mixture of variable composition, strength and origin.

Protective Antibodies Against Human Epidemic Influenza

Dr. Lucas Assumpção reports a study of protective antibodies against human epidemic influenza A virus (W. S. strain) in the serums of normal adults and children living in the city of São Paulo. None had a preceding clinical history of recent influenza or febrile cold. The protection experiments were made with Swiss mice. In the serum of children between 1 and 3 years of age the protection experiments were negative even when pure serum was used. With the adult serums 82.9 per cent were positive and 17.1 per cent negative.

The high percentage of individuals with antibodies against human epidemic influenza A virus (W. S.) proves that the influenza type caused by this virus is common in São Paulo. Protection experiments are now in progress with epidemic influenza B virus.

BUENOS AIRES

(From Our Regular Correspondent)

Dec. 6, 1946.

Medical Delegation Visits Buenos Aires

A group from Brazil, with Dr. Antonio Austregésilo as president, and two hundred and fifty delegates recently came to Buenos Aires with the representation of their government to pay a visit to the Argentinean members of the medical profession as represented in the Pan American Medical Congress, which was held in Rio de Janeiro. The delegation remained in Argentina ten days. The government of Argentina and members of the medical profession prepared receptions and medical meetings in honor of the delegates. Dr. Aloysio de Castro, past president of the Academia de Medicina de Rio de Janeiro, addressed the Academia de Medicina of Buenos Aires on the "project for a treaty of South American pathology," which was moved by Dr. Americo Ricaldoni of Uruguay in 1917 and approved by the faculties of medicine of Argentina, Brazil and Uruguay but which has not as yet been put into effect. Dr. Aráoz de Alfaro, the president of the Academia Nacional de Medicina of Buenos Aires answered that he considered this motion of great South American interest.

Geriatrics

A course in geriatrics recently given at the Hospital Británico, under the auspices of the Junta Argentina para el Estudio del Envejecer, included the following lectures: Dr. B. A. Houssay, physiology of old age; Dr. E. B. del Castillo, endocrinology in old age; Dr. A. C. Taquini, geriatrics of cardiovascular system; Drs. A. Casanegra and C. A. Cardini, geriatrics of respiratory and gastrointestinal systems, respectively; Dr. F. E. Krapf, neuropsychiatry in old age; Dr. D. del Valle, geriatrics and surgery, and Dr. A. Trabucco, urogenitary surgery in the old.

Medical Protection of Natives

A committee for the preparation of a Sanitary Census of natives to improve the medicosocial aid given to natives and mestizos was recently appointed through a special decree. The basis of the decree shows that the Secretariate of Public Health will give the natives and mestizos (numbering about 150,000 and 400,000, respectively) the benefits of public hygiene and medicine in accordance with the actual progress in medicine and hygiene.

Public Health

The 1946 budget of the Secretariat of Public Health is fixed at 61,798,675 Argentine pesos (about $15,500,000) of which 21,542,200 pesos is for salaries and 40,256,475 for other expenses.

The Secretariate of Public Health recently created laboratories for studies on yellow fever at the Instituto Bacteriológico Dr. Carlos G. Malbran and the Escuela de Lucha Antiestegómica in Santiago del Estero city.

Personals

Drs. Egidio S. Mazzei and Taylor Gorostiaga of Buenos Aires and Elyeser Magalhaes of Rio de Janeiro were awarded the premio Alvarenga by the Academia Nacional de Medicina del Brazil for their work on "Pulmonary Embolism." The experimental part of this work was carried on at the Instituto de Investigaciones of the Academia Nacional de Medicina of Buenos Aires, of which Dr. Mariano R. Castex is the head.

Drs. Tejerina Fotheringham, Oscar Cames, Juan Asugasti, Fernando Noguera and Oscar Maritofi, all of Argentina, were recently appointed honorary members of the Academia Peruana de Cirugía.

Dr. Mariano R. Castex was recently invited by the Oxford and Paris Universities to lecture there. He is now visiting in England and France.

Bureau of Investigation

MISBRANDED PRODUCTS

Abstracts of Notices of Judgment Issued by the Food and Drug Administration of the Federal Security Agency

[EDITORIAL NOTE.—These Notices of Judgment are issued under the Food, Drug and Cosmetic Act, and in cases in which they refer to drugs and devices they are designated D. D. N. J. and foods, F. N. J. The abstracts that follow are given in the briefest possible form: (1) the name of the product; (2) the name of the manufacturer, shipper or consigner; (3) the date of shipment; (4) the composition; (5) the reason for the charge of misbranding, and (6) the date of issuance of the Notice of Judgment—which is considerably later than the date of the seizure of the product and somewhat later than the conclusion of the case by the Food and Drug Administration.]

Car-Bo-Ak.—John L. Van Houten, Temple City, Calif., and Brunswig Drug Company, Los Angeles. Shipped Nov. 23, 1942. Composition: essentially water, alcohol, and extracts of plant materials, including licorice. Misbranded because falsely represented on label as an alterative, a blood tonic and a relief for rheumatic conditions, improper elimination, autointoxication and skin disorders such as scrofula, carbuncles, boils, styes and acne.—[*D. D. N. J., F. D. C. 1189; June 1945.*]

Citra Nesia.—Monarch Products Company, Los Angeles. Shipped between June 5 and July 6, 1943. Composition: an effervescent solution containing sodium phosphate, sugar, and a citrate. Misbranded because it was simply an imitation of another drug, citrate of magnesia, and because label did not accurately declare the quantity of contents, since the amount was short of the 12 fluid ounces declared on the label.—[*D. D. N. J., F. D. C. 1190; June 1945.*]

Dimels.—Jones-Hague, Inc., McKeesport, Pa. Shipped March 11, 1943. Composition: capsules each containing about 5 grains of a mixture of dried, powdered animal material and kaolin (China clay). The animal material apparently was of a glandular nature, such as pancreas, and contained a small amount of insulin and a starch-splitting enzyme equivalent to ½ of 1 per cent of pancreatin. Misbranded because insulin was not obtained from a batch for which a certificate or release had been issued, as required by law; also misbranded because label statement, "Each capsule contains Hormone Complexes as found in Isles Langerhans" was misleading, in that recommended dosage would not produce the well-known effects of the hormones found in the islands of Langerhans. Further misbranded because falsely represented as useful in treating incipient diabetes.—[*D. D. N. J., F. D. C. 1203; June 1945.*]

Estrovin in Oil.—Adson-Intrasol Laboratories, Inc., New York. Shipped Jan. 28 and March 11, 1942. Adulterated and misbranded because label falsely represented product to contain 5,000 International units of estrogenic ovarian follicular hormones per cubic centimeter, whereas it contained only 1,100 units of these.—[*D. D. N. J., F. D. C. 818, December 1943; and D. D. N. J., F. D. C. 1209, June 1945.*]

Helping Hand Laxative Tonic.—National Medicine Company, Nashville, Tenn. Shipped June 24, 1943. Composition: essentially epsom salt, iron and ammonium citrate, and extracts of plant drugs, including laxative and bitter substances, with a sugar, a benzoate, alcohol and water. Misbranded because falsely represented to be a tonic, to contain glycerin and to have iron and ammonium citrate as active ingredients, and because label did not warn that the product, a laxative, should not be used continually.—[*D. D. N. J., F. D. C. 1204; June 1945.*]

Hi-Lo Tablets.—Hi-Lo Products Company, St. Louis. Shipped April 20, 1943. Composition: essentially dried powdered yeast. Misbranded because carton and bottle labels and accompanying circulars (which carried name "Hi-Lo Anti-Gray Hair Vitamin Tablets—Vitamin B Complex Plus") falsely represented that this calcium pantothenate product would restore natural color to gray hair or prevent graying of it and correct or prevent nervousness, headache, dizziness, rapid heartbeat and numbness of feet and ankles.—[*D. D. N. J., F. D. C. 1244; June 1945.*] Also misbranded under provisions of the law applicable to foods, as reported in *F. N. J. 7344.*

Himrod's Asthma Powder.—Himrod Manufacturing Company, Hoboken, N. J. Shipped Oct. 8 and Nov. 14, 1941. Composition: essentially a mixture of stramonium and potassium nitrate. Misbranded because falsely represented as a treatment for asthma, whereas it was merely a palliative for the acute temporary manifestations of that disease; also misbranded because label gave false impression that the mixture would relieve paroxysms of asthma and hay fever and was a proper treatment for these conditions.—[*D. D. N. J., F. D. C. 1187; June 1945.*]

Imported Sea Vegetables Vitaminized with Added Vitamin A.—Mineralized Foods, Inc., Baltimore. Shipped between Feb. 17, 1942, and Jan. 23, 1943. Composition: dried seaweed. Misbranded because label falsely represented it as supplying mineral and vitamin deficiencies which would cause sinus disorders, colds, apoplexy and some other things.—[*D. D. N. J., F. D. C. 1246; June 1945.*] Also misbranded under provisions of the law applicable to foods, as reported in *F. N. J. 7345.*

Jayne's Vermifuge.—Dr. D. Jayne and Son, Inc., Philadelphia. Shipped Dec. 18, 1943. Composition: essentially extracts of plant drugs and a small amount of potassium carbonate, with sugar, alcohol and water, flavored with peppermint oil. Misbranded because falsely represented to remove large roundworms from children and adults, whereas tests on humans and laboratory animals showed that it did not do this.—[*D. D. N. J., F. D. C. 1237; June 1945.*]

Kalseom Tablets.—Mineralized Foods, Inc., Baltimore. Shipped between Feb. 17, 1942, and Jan. 23, 1943. Composition: claimed to consist of imported variety of sea vegetables, with bone calcium phosphate fortified with vitamins C and D. Misbranded because falsely represented to correct mineral deficiency which results in tuberculosis, asthma, poor teeth, brittle fingernails and other disorders.—[*D. D. N. J., F. D. C. 1246; June 1945.*] Also misbranded under provisions of the law applicable to foods, as reported in *F. N. J. 7345.*

Nuxated Iron.—Dae Health Laboratories, Stamford, Conn. Shipped Jan. 17, 1944. Composition: ferrous sulfate (64 milligrams per tablet), strychnine, compounds of calcium, magnesium and sodium, including carbonates and glycerophosphates and aromatic elements. Misbranded because label falsely represented product as an adequate treatment for run-down conditions and iron deficiency.—[*D. D. N. J., F. D. C. 1247; June 1945.*]

Opera Tablets.—Goodness Bros. Co., Webster, Mass. Shipped Sept. 25, 1943. Composition: a mixture of powdered plant drugs, including buchu, aloe, gamboge, capsicum and ginger. Misbranded because falsely represented as an effective treatment for a wide variety of disorders, including skin diseases, obesity, blood poisoning, fainting spells, dyspepsia, dropsy, anemia, gallstones, epilepsy, appendicitis and melancholia; further misbranded because label did not bear common or usual name of each active ingredient.—[*D. D. N. J., F. D. C. 1188; June 1945.*]

Schaffner's "Little Doc" Jr. First Aid Kit.—Gus. J. Schaffner Company, Avalon, Pa. Shipped Oct. 18, 1943. Adulterated and misbranded because the absorbent cotton in the kit was labeled "Sterilized," whereas it was not sterile, according to the standard of the United States Pharmacopeia.—[*D. D. N. J., F. D. C. 1224; June 1945.*]

Sea-Sol.—Mineralized Foods, Inc., Baltimore. Shipped between Feb. 17, 1942, and Jan. 23, 1943. Composition: soy beans, dried seaweed and sugar, yielding phosphorus, iron and iodine. Misbranded because falsely represented to prevent or correct shortness of breath, rapid heart palpitation, fatigue, stomach disturbances, iron deficiency, beri beri, arthritis and many other things.—[*D. D. N. J., F. D. C. 1246; June 1945.*] Also misbranded under provisions of the law applicable to foods, as reported in *F. N. J. 7345.*

Sea Vegecene.—Mineralized Foods, Inc., Baltimore. Shipped between Feb. 17, 1942, and Jan. 23, 1943. Composition: essentially dried and powdered seaweed containing various amounts of iodine, iron and phosphorus. Misbranded because label falsely represented that product has nutritional significance because of these substances and others not designated.—[*D. D. N. J., F. D. C. 1246; June 1945.*] Also misbranded under provisions of the law applicable to foods, as reported in *F. N. J. 7345.*

Sea-V-Aid.—Mineralized Foods, Inc., Baltimore. Shipped between Feb. 17, 1942, and Jan. 23, 1943. Composition: yeast and vegetable tissue, including seaweed, with other inorganic constituents, such as iodine. Misbranded because misrepresented as having nutritional value due to mineral content, and as being a treatment for unsteady nerves, premature aging, arteriosclerosis, apoplexy, pellagra and some other disorders.—[*D. D. N. J., F. D. C. 1246; June 1945.*] Also misbranded under provisions of the law applicable to foods, as reported in *F. N. J. 7345.*

Sea-Ve-Kra.—Mineralized Foods, Inc., Baltimore. Shipped between Feb. 17, 1942, and Jan. 23, 1943. Composition: powdered okra and dried seaweed, with other inorganic constituents, including iodine. Misbranded because label falsely represented it as a source of food minerals and vitamins A, B, C and D and a remedy for stomach ulcer.—[*D. D. N. J., F. D. C. 1246; June 1945.*] Also misbranded under provisions of the law applicable to foods, as reported in *F. N. J. 7345.*

Sedeom.—Mineralized Foods, Inc., Baltimore. Shipped between Feb. 17, 1942, and Jan. 23, 1943. Composition: dried powdered seaweed, calcium phosphate, calcium carbonate and starch, with iodine and other inorganic constituents, unnamed. Misbranded because falsely represented as to value in treating and preventing arthritis, kidney stones, rheumatic fever, premature aging and some other ailments.—[*D. D. N. J., F. D. C. 1246; June 1945.*] Also misbranded under provisions of the law applicable to foods, as reported in *F. N. J. 7345.*

Stumicaid.—Hoobler & Hazel Laboratory, Dayton, Ohio. Shipped Feb. 25, 1943. Chiefly organic protein material (not identified), with a small amount of plant substance, including anise, and a laxative such as senna. Misbranded because label falsely represented product as a remedy for most stomach ailments.—[*D. D. N. J., F. D. C. 1229; June 1945.*]

West's Imported Sea Vegetable Tablets.—Mineralized Foods, Inc., Baltimore. Shipped between Feb. 17, 1942, and Jan. 23, 1943. Composition: seaweed, representing, per tablet, various quantities of iodine, calcium, magnesium, phosphorus and iron. Misbranded because label falsely represented product as supplying deficient mineral elements in diet which cause arteriosclerosis, apoplexy, high blood pressure and many other disorders.—[*D. D. N. J., F. D. C. 1246; June 1945.*] Also misbranded under provisions of the law applicable to foods, as reported in *F. N. J. 7345.*

Medical Examinations and Licensure

COMING EXAMINATIONS AND MEETINGS

NATIONAL BOARD OF MEDICAL EXAMINERS EXAMINING BOARDS IN SPECIALTIES

Examinations of the National Board of Medical Examiners and the Examining Boards in Specialties were published in THE JOURNAL, March 15, page 801.

BOARDS OF MEDICAL EXAMINERS

ALABAMA: Montgomery, June 24-26. Sec., Dr. D. G. Gill, 519 Dexter Ave., Montgomery 4.

ARIZONA: * *Examination.* Phoenix, April 1-2. *Endorsement.* Phoenix, April 5. Sec., Dr. J. H. Patterson, 826 Security Bldg., Phoenix.

ARKANSAS: * *Medical. Examination.* June 5-6. Sec., Medical Board of the Arkansas Medical Society, Dr. L. J. Kosminsky, Texarkana. *Eclectic.* Little Rock, June 5. Sec., Dr. C. H. Young, 1415 Main St., Little Rock.

CALIFORNIA: *Written.* San Francisco, July 7-10. *Oral.* San Francisco, May 10-11. *Oral Clinical Examination for Foreign Medical Graduates.* San Francisco, June 21. Sec., Dr. Frederick N. Scatena, 1020 N. St., Sacramento 14.

DELAWARE: *Examination.* Dover, July 8-10. *Endorsement.* Dover, July 15. Sec., Medical Council of Delaware, Dr. J. S. McDaniel, 229 S. State St., Dover.

FLORIDA: * Jacksonville, June 24-25. Sec., Dr. Harold D. Van Schaick, 2736 S. W. Seventh Ave., Miami 36.

GEORGIA: Atlanta and Augusta, March 26-27. Sec., State Examining Boards, Mr. R. C. Coleman, 111 State Capitol, Atlanta 3.

IDAHO: Boise, July 14-16. Sec., Bureau of Occupational Licenses, Dr. S. M. Poindexter, Eastman Bldg., Boise.

ILLINOIS: Chicago, April 1-3. Supt. of Registration, Department of Registration & Education, Mr. Philip Harman, Springfield.

INDIANA: *Examination.* Indianapolis, June. Exec. Sec., Board of Medical Registration and Examination, Miss Ruth V. Kirk, 627 K. of P. Bldg., Indianapolis.

KANSAS: *Examination.* Kansas City, March 25-26. Sec., Board of Medical Registration and Examination, Dr. J. F. Hassig, 905 N. Seventh St., Kansas City 10.

KENTUCKY: Louisville, Sept. 22-24. Sec., State Board of Health, Dr. P. E. Blackerby, 620 S. Third St., Louisville 2.

MARYLAND: *Medical Examination.* Baltimore, June 17-20. Sec., Dr. E. H. Kloman, 1215 Cathedral St., Baltimore. *Homeopathic.* Baltimore, June 10-11. Sec., Dr. J. A. Evans, 612 W. 40th St., Baltimore.

MICHIGAN: * *Examination.* Detroit, June 16-18. Sec., Board of Registration in Medicine, Dr. J. E. McIntyre, 100 W. Allegan St., Lansing 8.

MINNESOTA: * Minneapolis, April 15-17. Sec., Dr. J. F. Du Bois, 230 Lowry Medical Arts Bldg., St. Paul.

MISSISSIPPI: Jackson, June 23-24. Asst. Sec., State Board of Health, Dr. R. N. Whitfield, Jackson 113.

MONTANA: Helena, April 1-2. Sec., Dr. O. G. Klein, First National Bank Bldg., Helena.

NEBRASKA: * *Examination.* Omaha, June. Dir., Bureau of Examining Boards, Mr. Oscar F. Humble, State Capitol Bldg., Lincoln.

NEVADA: *Examination.* Carson City, May 5. Sec., Dr. G. H. Ross, 215 N. Carson St., Carson City.

NEW JERSEY: Trenton, June 17-18. Sec., Dr. E. S. Hallinger, 28 W. State St., Trenton.

NEW MEXICO: * Santa Fe, April 7-8. Sec., Dr. LeGrand Ward, 141 Palace Ave., Santa Fe.

NORTH CAROLINA: *Endorsement.* Winston-Salem, April 30, June 24. *Examination.* Raleigh, June 23-26. Acting Sec., Mrs. L. McNeill, 226 Hillsboro St., Raleigh.

NORTH DAKOTA: Grand Forks, July 1-4. Sec., Dr. G. M. Williamson, 4½ S. Third St., Grand Forks.

OHIO: *Examination.* Columbus, June 17-20. Sec., Dr. H. M. Platter, 21 W. Broad St., Columbus.

OREGON: * *Endorsement.* Portland, April 25-26. Exec. Sec., Miss L. M. Conlee, 608 Failing Bldg., Portland 4.

PENNSYLVANIA: Philadelphia and Pittsburgh, July. Acting Sec., Bureau of Professional Licensing, Department of Public Instruction, Mrs. M. G. Steiner, 351 Education Bldg., Harrisburg.

RHODE ISLAND: * Providence, April 3-4. Chief, Division of Examiners, Mr. Thomas B. Casey, 366 State Office Bldg., Providence.

SOUTH CAROLINA: Columbia, June 23-25. Sec., Dr. N. B. Heyward, 1329 Blanding St., Columbia.

SOUTH DAKOTA: * Pierre, July 15-16. Sec., Medical Licensure, State Board of Health, Dr. Gilbert Cottam, Capitol Bldg., Pierre.

TENNESSEE: * *Examination.* Memphis, March 26-27. Sec., Dr. H. W. Qualls, 130 Madison Ave., Memphis 3.

WEST VIRGINIA: Charleston, March 31-April 2. Commissioner, Public Health Council, Dr. N. H. Dyer, State Capitol, Charleston 5.

* Basic Science Certificate required.

BOARDS OF EXAMINERS IN THE BASIC SCIENCES

ARIZONA: June 17. Sec., Mr. Francis A. Roy, Science Hall, University of Arizona, Tucson.

ARKANSAS: Little Rock, May 7. Sec., Mr. L. E. Gebauer, 701 Main Street, Little Rock.

COLORADO: Denver, June 4-5. Sec., Dr. Esther B. Starks, 1459 Ogden Street, Denver.

DISTRICT OF COLUMBIA: Washington, April 21-22. Sec., Commission on Licensure, Dr. G. C. Ruhland, 6150 E. Municipal Bldg., Washington 1.

FLORIDA: May 31. Final date for filing application is May 16. Sec., Dr. M. W. Emmel, University of Florida, Gainesville.

IOWA: Des Moines, April 8. Sec., Dr. Ben H. Peterson, Coe College, Cedar Rapids.

MICHIGAN: Ann Arbor and Detroit, May 9-10. Sec., Miss Eloise Lebeau, 101 N. Walnut St., Lansing.

MINNESOTA: Minneapolis, April 1-2. Sec., Dr. Raymond N. Bieter, 105 Millard Hall, University of Minnesota, Minneapolis 14.

NEBRASKA: Omaha, May 6-7. Dir., Bureau of Examining Boards, State Department of Health, Mr. O. F. Humble, 1009 State Capitol Bldg., Lincoln 9.

OREGON: June 7. Sec., Mr. C. D. Byrne, University of Oregon, Eugene.

SOUTH DAKOTA: Vermillion, June 6-7. Sec., Dr. G. M. Evans, Yankton.

TENNESSEE: Memphis & Nashville, March 24-25. Sec., Dr. O. W. Hyman, 874 Union Ave., Memphis.

WISCONSIN: Madison, April 12. Sec., Dr. William H. Barber, Scott & Watson Sts., Ripon.

Bureau of Legal Medicine and Legislation

MEDICOLEGAL ABSTRACTS

Charitable Hospitals: Liability for Employment of Unlicensed Dentists.—The plaintiff sued for damages alleged to have been caused by the negligence of the defendant hospital in hiring an unlicensed dentist in its dental clinic. From a verdict and judgment for the plaintiff, the defendant appealed to the Supreme Court of Errors of Connecticut.

The plaintiff went to the defendant's dental clinic for treatment of a toothache and swollen jaw and was examined by Keller, a substitute dental intern employed by the defendant. The examination, and x-rays taken in connection with it, revealed a decayed and infected wisdom tooth on the left side of the plaintiff's upper jaw. Four days later this tooth was extracted by Keller, following which extraction the plaintiff suffered a fracture of the alveolar process and a postoperative abscess which necessitated nine days' hospitalization.

The defendant hospital, said the court, is a public institution which maintains a dental clinic under the direction of a Dr. Anderson. Keller, not yet a graduate dentist, had attended Tufts Dental College for a period of three and two-thirds years and had been hired as a substitute dental intern on the recommendation of Dr. Anderson and the college faculty. He was not yet licensed to practice dentistry in Connecticut and there was no evidence that he was registered to practice in a clinic in accordance with the Connecticut statutes. The plaintiff contended that the defendant was negligent in the selection of Keller and that this negligence, plus that of Keller, caused the plaintiff's injuries.

The Connecticut statutes, said the Supreme Court, make it illegal for any person or corporation to employ an unlicensed dentist. When the legislature establishes a rule of conduct by statute, and its purpose in doing so is to protect others from injury, a violation of that rule of conduct constitutes negligence. Accordingly the court held that the defendant was guilty of corporate negligence in employing Keller.

Continuing, the court said that the general rule is that an employer is liable for the acts of an employee done in the course of his employment. In Connecticut, hospitals and other eleemosynary corporations are exempted from this rule when they have used due care in the selection of their employees. When, however, they fail to use due care in the selection of their employees, this exemption is no longer effective and the applicable principles of liability are those governing the ordinary relationship of master and servant. An essential element in such liability is the negligence of the employee. If the employee has not been negligent the employer is not liable. The court thus pointed out that principles governing malpractice are determinative of the question of Keller's negligence, the rule in this state being that no recovery may ordinarily be had in such cases unless expert testimony supporting the plaintiff's allegation of negligence somewhere appears. There is no such testimony in this case. On the contrary, the court concluded, all of the medical testimony was to the effect that the operation of the defendant's clinic in general and the treatment by Keller in particular were in accordance with standard practice or even better. The fact that the operation was followed by infection raises no presumption of want of proper care or skill. Since there was no evidence from which the jury reasonably could have concluded that Keller was negligent, the judgment was reversed and the cause remanded with directions to grant the defendant's motion to set aside the verdict.—*Haliburton v. General Hosp. Soc. of Connecticut, 48 A. (2d) 261 (Conn., 1946).*

Current Medical Literature

AMERICAN

The Association library lends periodicals to members of the Association and to individual subscribers in continental United States and Canada for a period of three days. Three journals may be borrowed at a time. Periodicals are available from 1937 to date. Requests for issues of earlier date cannot be filled. Requests should be accompanied with stamps to cover postage (6 cents if one and 18 cents if three periodicals are requested). Periodicals published by the American Medical Association are not available for lending but can be supplied on purchase order. Reprints as a rule are the property of authors and can be obtained for permanent possession only from them.

Titles marked with an asterisk (*) are abstracted below.

American Heart Journal, St. Louis

32:679-832 (Dec.) 1946

*Esophageal Electrocardiogram in Arrhythmias and Tachycardias. S. Butterworth and C. A. Poindexter.—p. 681.
Anoxemia and Exercise Test in Diagnosis of Coronary Disease. G. Biörck.—p. 689.
Plasma Concentrations of Quinidine, with Particular Reference to Therapeutically Effective Levels in 2 Cases of Paroxysmal Nodal Tachycardia. A. F. Delevett and C. A. Poindexter.—p. 697.
Effects of Ingestion of Large Amounts of Sodium Chloride on Arterial and Venous Pressures of Normal Subjects. H. Grant and F. Reischsman.—p. 704.
Electrocardiographic Patterns in Penetrating Wounds of Heart. P. H. Noth.—p. 713.
*Clinical Evaluation of Powdered Human Blood Cells in Treatment of Ulcers of Extremities Associated with Vascular Disorders. M. W. Anderson, N. W. Barker and T. H. Seldon.—p. 754.
Studies on Vascularization of Aorta: I. Vascularization of Aorta in Normal Dog. J. G. Schlichter.—p. 770.

Esophageal Electrocardiogram.—It has been the practice of Butterworth and Poindexter to take esophageal electrocardiograms in all cases in which the P waves were not distinctly visible in any of the leads from the surface of the body. Esophageal electrodes may have a single terminal at the tip of the tube or may have several located at intervals near the tip. The technic of introducing the tube is exactly the same as for a stomach tube. The esophageal lead can be paired with any other lead, but the authors commonly use the left leg or preferably the indifferent electrode of Wilson. At the 55 cm. level the tip of the tube is usually in the stomach. A record is taken at this level, and the tube is then withdrawn in increments of 2 or 2.5 cm. to the 30 cm. level, which usually places the tip above the heart. Levels from 55 to 40 cm. are usually in close proximity to the diaphragmatic surface of the heart and accentuate the ventricular potentials, while those from the 40 to the 30 cm. levels usually overlie the auricles and accentuate the auricular potentials. Several electrocardiograms are reproduced, illustrating the value of the esophageal electrocardiogram in accurately diagnosing certain types of arrhythmia and tachycardia.

Powdered Human Blood Cells in Treatment of Ulcers of Extremities.—Anderson and his associates regard the topical application of powdered human blood cells in treating chronic ulcers of the extremities associated with vascular disease as one of several methods of bland and nonirritating local treatment available. In order to evaluate its effect, the authors have reviewed cases at the Mayo Clinic. In approximately one half in which both ischemic ulcers and stasis ulcers were treated with the powdered blood cells, healing was much accelerated. In the other half in which powdered blood cells were used, it is questionable whether healing occurred any more rapidly than it would have with other bland local applications. In a few cases less healing occurred or the treatment was not well tolerated. It is difficult to determine whether the favorable response occurs from partial desiccation, from some healing factor in the cells, from nutrition supplied by the crust or merely because the crust is protective and entirely nonirritating. Nevertheless it is encouraging to observe progress in the ulcers, with first a puckering of the surrounding skin, then a freshening and reddening of the gray, avascular base, and finally granulations with epithelium creeping in from the margins. Certain disadvantages of wet dressings, such as maceration of the skin and chilling, are avoided with this "dry" method of treatment.

American Journal of Clinical Pathology, Baltimore

16:737-808 (Dec.) 1946

Nutritional Aspects of Certain Endocrine Disturbances. G. R. Biskind and M. S. Biskind.—p. 737.
Further Notes on Pathology of Acute Epidemic Hepatitis and Homologous Serum Jaundice. D. A. Wood and M. B. Black.—p. 746.
*Pathogenesis of Acute Appendicitis. M. G. Bohrod.—p. 752.
*Pathogenesis of Erythroblastosis Fetalis: Statistical Evidence. A. S. Wiener.—p. 761.
False Positive Kahn Reactions: Loss of Titer on Storage of Serum in Ice Box. J. M. Lubitz.—p. 768.
Rare Malignant Tumors in Children. P. H. Hartz and A. van der Sar.—p. 776.
Periarteritis Nodosa in Granuloma of Unknown Etiology: Report of 2 Cases. T. Weinberg.—p. 784.
Large Hemangioma of Liver Successfully Removed Surgically: Report of Case. A. R. Peale and J. N. Coombs.—p. 792.
Large Ventricular Tumor of Ependymal Origin. P. A. Van Pernis.—p. 796.

Pathogenesis of Acute Appendicitis.—Bohrod shows that the two most generally accepted theories attempting to explain the genesis of acute appendicitis can be subsumed in one if it is postulated that (1) the attack of acute appendicitis follows obstruction of the appendix and (2) the most common cause of the obstruction is the lymphoid tissue of the appendix, a labile structure susceptible of rapid change under stimulation. The lymphoid tissue reaches its maximum development in the first decade of life. This tissue is better developed in the male than in the female. The muscularis does not develop fully until the second decade, and it is only at this time that the lumen becomes small. The relationship between the amount of lymphoid tissue and the size of the lumen represents the ability of the lymphoid structure to obstruct the lumen. This relationship correlates well with the characteristic age and sex distribution of acute appendicitis. The lymphoid tissue is susceptible of rapid response to internal stimuli and to environmental factors. This makes understandable the geographic distribution of acute appendicitis, the relationship of this disease to distant infections and the increase of its incidence in periods of climatic variabilty. Whatever the mechanism of its swelling, the lymphoid tissue causes appendicitis by obstructing the lumen of the appendix. Obstructions of the appendical lumen other than those due due to swollen lymphoid tissue are adequate causes of acute appendicitis but do not explain the greatest number of cases of this common disease.

Pathogenesis of Erythroblastosis Fetalis.—Wiener analyzed 97 families with erythroblastotic infants and fetuses from the standpoint of the quality of the Rh antibodies in the maternal serum and the nature of the clinical manifestations in the infants and fetuses. In 25 families, in which the maternal serum contained bivalent antibodies (agglutinins), 8 per cent of the fetuses or infants were stillborn, 28 per cent had congenital hemolytic anemia and 64 per cent had icterus gravis. In 57 families, in which the maternal serum contained univalent antibodies (blockers or glutinins), 43.9 per cent of the fetuses or infants were stillborn, 42.1 per cent had congenital hemolytic anemia and 14 per cent had icterus gravis. This confirms the author's theory of pathogenesis of erythroblastosis fetalis, under which potent univalent Rh antibodies would be expected to cause stillbirths, while potent bivalent Rh antibodies should give rise to icterus gravis. Congenital hemolytic anemia appears to be a milder manifestation of erythroblastosis and occurs when the maternal antibody titer is low in cases both with univalent and with bivalent antibodies. In 15 families, in which the maternal serum contained a mixture of univalent and bivalent Rh antibodies, the syndromes in erythroblastotic infants and fetuses were similar to those encountered in families with univalent antibodies alone. This confirms the hypothesis that univalent antibodies traverse the placenta more readily during pregnancy than do bivalent antibodies, so that the former take precedence over the latter when the two are present together in the maternal serum.

American Journal of Diseases of Children, Chicago

72:635-790 (Dec.) 1946

*Effect of Penicillin in Treatment of Infantile Congenital Syphilis: Further Observations. R. V. Platou, A. J. Hill Jr., N. R. Ingraham and others.—p. 635.

Parenteral Administration of Ammonium Chloride for Alkalosis of Congenital Hypertrophic Pyloric Stenosis: Preliminary Report. G. B. Forbes and Jane A. Erganian.—p. 649.

*Relative Frequency of "Subclinical" Poliomyelitis: Daily Temperature Studies on Intimate Contacts of Infectious Patients. A. E. Casey, W. I. Fishbein, I. Abrams and H. N. Bundesen.—p. 661.

*Anomalous Origin of Left Coronary Artery. R. A. Lyon, R. J. Johansmann and Katharine Dodd.—p. 675.

Staphylococcic (Suppurative) Pneumonia in Infancy and Childhood and Its Surgical Aspects. S. Blumenthal and H. Neuhof.—p. 691.

Auricular Flutter with Block in Children. B. Hoyer and R. A. Lyon.—p. 734.

Penicillin in Congenital Syphilis.—Platou and his associates find that 122 additional cases of manifest congenital syphilis in children under 2 years of age have been treated by the university groups at New Orleans, Philadelphia, Baltimore and Galveston. This brings the total number now suitable for analysis to 191. Penicillin appears to be the best agent for the treatment of infantile congenital syphilis. The total dosages employed have varied from 20,000 up to 150,000 units per kilogram of body weight. It is recommended that dosage schedules in excess of 40,000 units per kilogram be used and that treatment continue for sixty or more equal intramuscular injections given at three hour intervals. Schedules comprising 80,000 or more units per kilogram, divided into 120 equal intramuscular injections given every three hours night and day for a period of fifteen days, have not yet been evaluated. Reactions to therapy have appeared unimportant. Only a relatively small number of infants will demonstrate seronegativity during or soon after a single course of penicillin. The number of patients becoming seronegative increases with each month of observation for at least eighteen months. Periodic examinations are necessary to recognize the small number of serologic and clinical relapses which will require additional therapy. Deaths among these infants do not appear to be related to the use of penicillin.

Subclinical Poliomyelitis.—Casey and his associates say that in a study of poliomyelitis carried out in Chicago in the summer and fall of 1945 daily temperature determinations were made on a number of the most intimate child contacts of patients with poliomyelitis. As a control similar studies were made on noncontacts living in the same block as the patient and on control children of the same age living ten and fifty blocks distant. By this procedure many fevers were detected in children who had no complaints of illness. As many of these as could be persuaded were checked several weeks later by examination of the spinal fluid. This paper reports the incidence and clinical features of illnesses observed among these contact, noncontact and control children. The evidence, although scanty, is sufficient to indicate that perhaps 98 per cent of poliomyelitis is a mild, widespread, highly communicable disease of young children leaving no residual paralysis. Transient paralysis occurs in about 5 per cent of all cases and the meningitic form (nonparalytic but with stiff neck or stiff back, head drop and increased cells and protein in the spinal fluid in the first week) in about 14 per cent. The fatality rate seems not to exceed 0.7 per cent. Residual paralysis in poliomyelitis seems an infrequent complication, and perhaps not more than 1 child in 40 or 50 is so affected.

Anomalous Origin of Left Coronary Artery.—The histories of 2 infants with anomalous origin of the coronary arteries recorded by Lyon and his co-workers bring the total number of reported cases to 20. In both cases enlargement of the heart, persistent symptoms of respiratory distress and the inversion of the T waves in the first lead or in all leads of the electrocardiogram permitted a tentative clinical diagnosis of the nature of the cardiac disorder. Important abnormalities found, other than the origin of the left coronary artery from the pulmonary artery, were limited to the left ventricle, where there were endocardial fibrosis, degenerative changes of the myocardium with replacement by fibrous tissue, infarcts in the myocardium and in 1 case persistence of embryonic sinusoids.

American Journal of Medical Sciences, Philadelphia

212:641-768 (Dec.) 1946

*Effect of Di-Isopropyl-Fluorophosphate (DFP) on Patients with Myasthenia Gravis. J. H. Comroe Jr., J. Todd, G. D. Gammon and others.—p. 641.

*Clinical and Roentgenologic Aspects of Coccidioidomycosis. C. F. Sweigert, J. W. Turner and J. B. Gillespie.—p. 652.

*Penicillin Therapy in Pyogenic Dermatoses. J. G. Hopkins and H. Lawrence.—p. 674.

Electrocardiographic Phenomena Associated with Spontaneous Pneumothorax and Mediastinal Emphysema. D. Littmann.—p. 682.

Some Factors That Modify Effect of Trisodium Citrate on Absorption of Oral Penicillin. R. H. Broh-Kahn and R. F. Pedrick.—p. 691.

Effect of Antimony on Electrocardiogram. E. F. Schroeder, F. A. Rose and H. Most.—p. 697.

Thrombosis and Embolism of Pulmonary Vessels, with Special Reference to Pulmonary Vein Thrombosis. D. M. Spain and J. B. Moses.—p. 707.

Rheumatoid Arthritis: I. Introduction to Study of Its Pathogenesis. A. D. Wallis.—p. 713.

Id.: II. Nonspecific Serologic Reactions. A. D. Wallis.—p. 716.

Id.: III. Pneumococcus Antibodies. A. D. Wallis.—p. 718.

Changing Concepts in Mediterranean (Cooley's) Anemia. I. J. Wolman and B. Dickstein.—p. 723.

Ovarian Tumors. F. B. Block.—p. 738.

Di-Isopropyl-Fluorophosphate in Myasthenia Gravis.—According to Comroe and his associates di-isopropyl-fluorophosphate (DFP) is a compound which, although completely unrelated chemically to neostigmine, has been shown to produce inhibition of cholinesterase in serum, red cells, muscle and brain. The rates of restoration of these activities are slow following its administration and consequently its effects are far more prolonged than those of neostigmine or physostigmine. It was used in treating 7 patients with myasthenia gravis. Some patients were benefited, but in no case did the objective or subjective improvement following its use equal or exceed that produced by neostigmine. Attempts to give larger doses of the compound resulted in nausea and vomiting and symptoms referable to the central nervous system. Despite the fact that it lowered plasma cholinesterase to zero, it produced less improvement than did neostigmine. The potentialities of a drug for treating myasthenia gravis cannot be gaged by its effect on plasma cholinesterase. The compound may be utilized in nontoxic doses to obtain its prolonged effect at the same time that neostigmine is used to obtain its characteristically stronger action.

Clinical and Roentgenologic Aspects of Coccidioidomycosis.—Sweigert and his associates report 77 cases of coccidioidomycosis treated in a hospital and a study of clinical and roentgenographic material on approximately 200 additional patients observed in southern Arizona between August 1941 and August 1945. The fact that coccidioidomycotic cavities and nodules may persist for many months or several years must be taken into consideration in contemplated mass surveys of the chest. Three case histories illustrating different clinical patterns of disseminated coccidioidomycosis, 1 with apparent recovery from coccidioidal meningitis, are reported.

Penicillin in Pyogenic Dermatoses.—Hopkins and Lawrence made observations on 618 soldiers, of whom 211 were treated in a hospital and 407 in a dispensary. Local penicillin therapy was rapidly effective in the majority of cases of impetigo, ecthyma and the pyogenic complications of dermatophytosis. Intramuscular penicillin was effective in furunculosis and hidrosadenitis. One third of the cases of folliculitis of the beard cleared at least temporarily under penicillin. Concentrated local applications combined with intramuscular injections often appeared necessary. Secondary infections in eczematous dermatitis were controlled in 40 per cent of cases, but sensitization developed frequently after local therapy. Penicillin was seldom effective in seborrheic dermatitis, intertrigo, folliculitis of the trunk or extremities or acne.

American Journal of Ophthalmology, Cincinnati

29:1499-1636 (Dec.) 1946

Cytology of Conjunctival Exudates. P. Thygeson.—p. 1499.
Contributions to Surgery of Congenital Cataract: I. Modification of Discission in Preschool Age Group. W. F. Moncreiff.—p. 1513.
Electroencephalography and Ophthalmology. A. Callahan and F. C. Redlich.—p. 1522.
*Hereditary Nystagmus Occurring as Sex Linked Character Recessive in Female. C. W. Rucker.—p. 1534.
Influence of Barbiturate on Various Forms of Nystagmus. M. B. Bender and F. H. O'Brien.—p. 1541.
Pathologic Changes in Rabbit Eyes Resulting from Exposure to Liquid Nitrogen Mustards. W. O. LaMotte Jr. and I. H. Leopold.—p. 1553.
Effect of Oily Drops on Eyes Exposed to Mustard Vapor. G. I. Uhde and E. B. Dunphy.—p. 1562.
Seed Grafting of Conjunctiva in Treatment of Symblepharon. A. Hagedoorn.—p. 1568.
Implantation into Tenon's Capsule. S. A. Fox.—p. 1571.
Orbital Cellulitis Followed by Total Blindness. H. C. Donahue.—p. 1574.

Hereditary Nystagmus.—According to Rucker, hereditary nystagmus appears as a constant, horizontal, to and fro movement of the eyes, pendular in type, or small excursion on forward gaze and coarser on looking to the sides. Nystagmus is said to be inherited in any one of several different ways—as a mendelian dominant or recessive character or as a sex linked character. The propositus of the family reviewed in this report was a 7 year old boy whose father brought him to the clinic to have an operation performed on his eyes to steady them. The family had 231 members in six generations. The 21 members who had nystagmus were males, and all inherited it through females who themselves were not affected. In a number of instances the gene passed through a chain of several females before it became evident in a male descendant. In no case has a male transmitted the defect to his son. All descendants of nonaffected males are free from the defect. In this family the character is sex linked and without exception has been recessive in the females.

Am. J. Roentgenol. & Rad. Therapy, Springfield, Ill.

56:683-816 (Dec.) 1946

Radiology in the Atomic Age. R. C. Beeler.—p. 683.
Some Observations Concerning Ewing's Tumor Seen in Army General Hospital. G. W. Heublein, S. E. Moolten and J. C. Bell.—p. 688.
Fibrous Dysplasia of Bone. A. W. Mann, O. Eitzen and E. P. McNamee.—p. 707.
Para-Articular Calcification in Lower Extremities of Paraplegic Patients. W. C. Ward.—p. 712.
Revised "Ossification Index" for Detection of Endocrine Disorders in Childhood. D. W. Leonard.—p. 716.
Roentgen and Cardiac Manifestations of Funnel Chest. J. G. Teplick and E. H. Drake.—p. 721.
Technic of Roentgenologic Demonstration of Pulmonary Infarcts. L. L. Robbins.—p. 736.
Simulated Dextrocardia Associated with Bronchiectasis: Report of Case. S. A. Leader.—p. 743.
Case of Diverticulosis of Vermiform Appendix Roentgenographically Demonstrated. J. H. Gilmore and T. K. Mahan.—p. 748.
Cylindrical Radium Applicator for Treatment of Surface Vaginal Lesions. E. F. Focht, L. D. Marinelli and G. H. Twombly.—p. 751.
*Ionization Measurements with Bone Chambers and Their Application to Radiation Therapy. K. W. Stenstrom and J. F. Marvin.—p. 759.
Absorption Measurements for Broad Beams of 1 and 2 Megavolt Roentgen Rays. G. Singer, C. B. Braestrup and H. O. Wyckoff.—p. 771.

Ionization Measurements with Bone Chambers.—Stenstrom and Marvin made measurements with ionization chambers constructed of bone in order to obtain some information on the total ionization in bone in connection with roentgen therapy. Maximum values of over 400 per cent (bone compared to lucite) were observed for 100 kilovolts (peak) with a half value layer of 0.3 mm. of copper, and of about 380 per cent for 140 kilovolt peak with a half value layer of 0.35 mm. of copper. Values were lower for higher voltages and greater filtration. Measurements taken with a water phantom indicated a greater amount of ionization in bone (up to 5 cm. depth in the phantom) when 140 kilovolt peak was used, than was observed at any other voltage. This may have direct application in therapy as 140 kilovolt peak may be preferred when ionization in bone is desirable and used with caution when bone damage is to be avoided.

American Practitioner, Philadelphia

1:169-226 (Dec.) 1946

Treatment of Acute Rheumatic Fever. T. N. Harris.—p. 169.
Interviewing Technics. J. M. Lyon.—p. 174.
Folic Acid in Treatment of Macrocytic Anemias. R. W. Heinle.—p. 179.
Initial Care of Casualties. G. M. Morrison.—p. 183.
Symptomatic Treatment of Bronchial Asthma in Infancy and Childhood. J. Glaser.—p. 185.
*Neurologic Manifestations in Preicteric Phase of Infectious Hepatitis. L. Weinstein and W. T. Davison.—p. 191.
Treatment of Functional Uterine Hemorrhage. E. L. Williams.—p. 198.
Rheumatic Fever—Preventive Aspects. H. H. Riecker.—p. 203.
Proctologic Considerations of Interest to Internists. V. T. Young.—p. 207.
What Physician Should Know About Foreign Bodies That Have Been Swallowed. P. P. Vinson.—p. 211.

Neurologic Manifestations in Infectious Hepatitis.—Weinstein and Davison describe 4 cases of infectious hepatitis with manifestations of severe involvement of the nervous system in the preicteric phase of the disease. Headache, rigidity of the neck, increase in the number of cells in the spinal fluid, pain in the eyes, photophobia, blurred vision, numbness of a hand, lethargy, positive Kernig's signs, hypoactive deep tendon reflexes, absence of the superficial ones and a paralyzed bladder were the symptoms presented by these patients. If the attacks occur during the time of the year when poliomyelitis is prevalent, as did the ones reported in this paper, a diagnosis of acute anterior poliomyelitis may be made. A history of contact with a case of infectious hepatitis may be very helpful in suggesting this disease as the cause for the neurologic signs and symptoms. In cases of so-called nonicteric infectious hepatitis the etiology of the neurologic signs may be completely overlooked unless chemical studies of the blood and urine are carried out.

American Review of Tuberculosis, New York

54:325-460 (Oct.-Nov.) 1946

BCG Vaccination in Hospitals and Sanatoriums of Saskatchewan: Study Carried Out by National Research Council of Canada. R. G. Ferguson.—p. 325.
Psychologic Moment in Treatment of Tuberculosis. J. D. Riley.—p. 340.
Importance of Postsanatorium Care of Tuberculous. F. H. Heise.—p. 344.
*Pathogenesis of Pleurisy with Effusion: Clinical Epidemiologic and Follow-Up Study of 190 Cases. B. C. Thompson.—p. 349.
Multiple Infections in Human Tuberculosis. A. Westergren.—p. 364.
Thoracoplasty for Pulmonary Tuberculosis: Observations on 32 Patients in Older Age Group. P. E. Zuelke, W. E. Adams and R. G. Bloch.—p. 368.
*Artificial Pneumothorax and Pneumonolysis: Results in 100 Patients. W. J. Branday.—p. 376.
Tuberculosis Survey Among Chinese Students. R. Tak Eng.—p. 385.
*Tuberculosis in Captive Wild Birds: Decrease of Its Incidence Following Change in Diets. H. L. Ratcliffe.—p. 389.
Autolytic Tuberculin: Its Properties and Significance of Its Mode of Formation. H. J. Corper and C. Clark.—p. 401.
Solitary Pulmonary Tumor: Cyst-like Tumors Associated with Anomalies of Ribs. E. Wayburn.—p. 413.
Broncholithiasis. D. W. Zahn.—p. 418.

Pathogenesis of Pleurisy with Effusion.—Thompson reviews observations on 190 cases of simple pleurisy with effusion. There was a high incidence of preceding or concurrent intrathoracic lesions typical of primary tuberculosis, confirmed sometimes by the later development of calcification. Cavity formation occurred in 5 cases presenting these lesions. The lesions were glandular or parenchymal; they were not always on the same side as the effusion. The incidence both of primary type lesions and of pleural effusion was higher on the right side than on the left. Pleurisy with effusion was found predominantly in the years of late adolescence and young adult life. There was an excess of males over females confined to the 15 to 19 year group. The follow-up revealed subsequent tuberculosis in 12 per cent of the total number of patients within the first year, in 8 per cent of the remainder within the second year and in a total of 25 per cent within five years. No case occurred after five years. In 15 per cent of these cases the first evidence of disease was extrapulmonary. The death rate for the 190 patients over the five year period was 3.5 per cent.

Results of Artificial Pneumothorax and Pneumonolysis.—Branday presents observations on 100 patients who were treated by artificial pneumothorax and in whom section of adhesions was required in order to effect efficient collapse. All were ambulant during the greater part of treatment; few stayed in the hospital more than a few days or weeks of operation, and nearly all continued to work. Nearly all were in poor economic circumstances, quite unable to obtain extra nourishment and rest. Individual resistance appeared to be a most important factor in favorable progress and to depend on the economic position of the patient. Efficiency of collapse appeared to be the factor in treatment which exerted the most decided influence on the outcome of the case. Treatment of this group of patients appears to have been worth while in spite of the unfavorable type of disease and inability of patients to cease work on account of their economic circumstances. In 22 of the 39 patients who died up to December 1945 the operation had been technically efficient; they died as a result of extension of disease, caused by persistently patent cavities, or of toxemia due to empyema, which was caused by a spontaneous pneumothorax in 4 cases.

Diet and Tuberculosis in Captive Wild Birds.—Ratcliffe shows that a change in the system of feeding at the Philadelphia Zoological Garden has been followed by a distinct decrease in the frequency of avian tuberculosis. With the exception of a mixed lot of birds in an indoor flight cage, the disease has been most common among groups of birds whose food had consisted chiefly of whole or cracked grains. In the new diet grain has been replaced by a mixed ration. This has improved the quality and quantity of protein, has increased elements of the vitamin B complex and has added vitamins A and D and iodized salt to the diets. In some groups the drop in tuberculosis could have resulted from decreases in the number of imported infections. In other groups however, all evidence suggests that resistance has been increased by improved nutrition.

Archives of Internal Medicine, Chicago

78:629-780 (Dec.) 1946

Typhoid: Clinical Analysis of 360 Cases. B. M. Stuart and R. L. Pullen.—p. 629.
*Latent Phase of Asiatic Schistosomiasis. P. K. Mason, W. B. Daniels, F. K. Paddock and H. H. Gordon.—p. 662.
*Clinical Nephropathies in Early Syphilis. E. W. Thomas and M. Schur.—p. 679.
*Association of Pneumonia with Erythema Multiforme Exudativum: Commission on Acute Respiratory Diseases. J. H. Dingle and others.—p. 687.
Behavior and Psychologic Problems of Young Diabetic Patients: Ten to Twenty Year Survey. A. E. Fischer and H. Dolger with technical assistance of Janet C. Loeb and B. Gordon.—p. 711.
Syphilis: Review of Recent Literature. F. W. Reynolds and J. E. Moore.—p. 733.

Latent Phase of Asiatic Schistosomiasis.—The study by Mason and his associates is based on observations of 300 patients admitted to Harmon General Hospital approximately six months after the onset of their acute illness overseas. Although the majority had residual complaints, such as abdominal discomfort, weakness, headaches, myalgia and nervousness, their general physical condition was excellent. In spite of previous treatment overseas, approximately one third of the patients had the ova of Schistosoma japonicum in their stools when the initial evaluation of their status was made at Harmon General Hospital. Treatment with antimony and potassium tartrate and fuadin containing equivalent amounts of trivalent antimony (0.58 Gm.) resulted in the disappearance of ova from the stools in 81 and 18 per cent of the patients respectively. Since no major toxic effects were encountered with antimony and potassium tartrate in the concentration employed, it is the drug of choice. Evidence indicates that 444 cc. of a 0.5 per cent solution of antimony and potassium tartrate, U. S. P., is the most effective therapy. This is given intravenously on alternate days, beginning with 8 cc. and increasing the dose 4 cc. with each dose until a maximal dose of 28 cc. is given. The dose of 28 cc. is repeated every other day until 444 cc. (2.2 Gm.) of antimony and potassium tartrate has been received.

Nephropathies in Early Syphilis.—Thomas and Schur state that 12, or less than 0.3 per cent of those treated for secondary syphilis, showed greatly abnormal urinary findings which responded rapidly and dramatically to intensive, rapid treatment for syphilis. Ten of the 12 were classified as syphilitic nephrosis and 2 as nephritis. In syphilitic nephrosis results of tests of renal function are not significantly abnormal as a rule, but albuminuria and cylindruria are present. In early syphilitic nephritis there is less albuminuria than in nephrosis and more hematuria. In 1 case of diffuse glomerulonephritis apparently due to secondary syphilis, in which there was hypertension and secondary anemia, there was response to antisyphilitic treatment with penicillin. Early syphilitic nephropathies leave no demonstrable sequelae.

Association of Pneumonia with Erythema Multiforme Exudativum.—The report by Dingle and his associates of the Commission on Acute Respiratory Diseases deals with 6 cases of erythema multiforme exudativum with predominant involvement of the mucous membranes of the mouth, seen at the Regional Station Hospital at Fort Bragg, North Carolina. In 3 of the cases clinical and roentgenographic evidence of pulmonary involvement was demonstrated. The report emphasizes the relationship of pneumonia to erythema multiforme exudativum. The latter has been regarded as a specific infectious disease, possibly of virus causation. Bacteriologic studies in this, as in other studies, failed to yield results, except that in 1 case bacteriologic and serologic evidence of beta hemolytic streptococcus infection was secured. While it is improbable that this organism represents the usual cause of erythema multiforme exudativum, it is possible that it may be one of the causes. The studies carried out in animals and embryonated eggs were probably adequate to rule out the presence of the virus of herpes simplex, vesicular stomatitis and members of the psittacosis-meningopneumonitis group. No etiologic agent was found. These studies neither rule out nor support a possible virus causation for cases of erythema multiforme exudativum. A report in the *Canadian Medical Association Journal* (**53**:427 [Nov.] 1945) on "Mucosal Respiratory Syndrome" states that nonbacterial pneumonia was observed in 14 of 17 cases presenting the severe form of erythema multiforme exudativum. The authors conclude that pneumonia was an integral feature of the syndrome and that its cause was not bacterial and was probably viral. Attempts to isolate an agent from the lung in the fatal case reported here were carried out on horses, cows, sheep, pigs and guinea pigs. Lesions were not produced in any of the animals.

Archives of Otolaryngology, Chicago

44:647-780 (Dec.) 1946

Penicillin Therapy in Otorhinolaryngologic Practice. F. H. Krauss.—p. 647.
*Penicillin in Peritonsillar Abscess and Peritonsillar Phlegmon: Report of Penicillin Therapy in 25 Cases. A. Rosenberg.—p. 662.
Gingival Hemorrhage with Oral Manifestations in Hereditary Hemorrhagic Telangiectasia: Successful Control with Sclerosing Agent Sylnasol; Effect of Vitamin P and Nicotinic Acid; Role of Case Reported Which Was Observed Five Years. S. Peluse.—p. 668.
New Treatment for Hearing Disorders. H. Hirschfield, M. Jacobson and A. Jellinek.—p. 686.
*Burns of Upper Respiratory Tract and Eyes from Nitrogen-Mustard Gas (1149): Clinical Study. G. I. Uhde.—p. 701.
Contributions to Plastic Surgery During 1945. L. A. Peer.—p. 715.

Penicillin in Peritonsillar Abscess.—The studies reported by Rosenberg were carried out by army doctors in Germany on military personnel between the ages of 21 and 41. Twenty-five cases of peritonsillar abscess and peritonsillar phlegmon were studied. Ten doses of penicillin, 20,000 Oxford units each, were given intramuscularly every three hours. Five patients required incision and drainage; in 2 patients the abscess ruptured spontaneously; in the remainder the acute inflammatory process subsided under treatment with penicillin. The therapeutic results obtained with penicillin in peritonsillar phlegmon are superior to those obtained with sulfonamides. If used early, penicillin may avert abscess formation and subsequent incision and drainage.

Burns from Nitrogen Mustard Gas (1149).—Uhde collected information on 8 casualties resulting during the developmental operation of a pilot plant for nitrogen mustard (1149) at Edgewood Arsenal, Md. This is a relatively unknown gas developed during World War II. Representative case histories of a vapor and of liquid burn are presented. The commonest complaint pertaining to the upper respiratory tract was hoarseness, and the commonest lesion was diffuse inflammation, frequently spotted with necrotic ulcers of grayish slough. It is supposed that these ulcers were due to the necrotizing action of the gas per se, but they may have been the result of bacteria acting on devitalized tissue. There was evidence that the latter surmise was true to a certain extent. The most frequent eye complaint was a burning sensation characterized by conjunctival injection and superficial punctate keratitis. Symptoms of acute esophagitis and gastritis were an interesting observation in that they may have been due to the swallowing of contaminated air. Under the conditions of these accidents the mucosa of the upper respiratory and digestive tracts and the conjunctiva appeared to be equally sensitive to the vapor of this gas.

Bulletin of Los Angeles Neurological Society

11:97-180 (Sept.-Dec.) 1946. **Partial Index**

Etiology of Idiopathic Epilepsy. J. M. Nielsen.—p. 97.
Intracranial Complications of Diseases of Eye and Orbit. C. B. Courville and R. J. Schillinger.—p. 102.
Cerebral Malaria: Review of Literature and Report of Case with Residual Symptoms Indicative of Cerebellar Involvement. C. W. Irish.—p. 111.
Calcification in Ganglion Cell Tumors of Brain: Review of Literature and Report of Surgically Verified Case. P. J. Vogel and C. B. Courville.—p. 124.
Visual Hallucinations as Localizing Manifestations of Lesions of Temporal and Occipital Lobes: Report of 2 Illustrative Cases with Symptoms Due to Vascular Malformations. R. Frantz and P. J. Vogel.—p. 135.
Multiple Gliomas: Survey of Problem and Report of 3 Additional Cases. N. E. Carl.—p. 159.
*Cerebellar Subdural Hydroma: Report of Acute Case Following Head Injury. W. T. Grant.—p. 164.
*Treatment of Epilepsy with Hydantal, New Anticonvulsive Drug: Preliminary Report of Its Use in 16 Cases. K. O. Von Hagen.—p. 168.
*Denial of Own Blindness (Anton's Syndrome): Report of 2 Cases, 1 with Autopsy. N. W. Brockman and K. O. Von Hagen.—p. 178.

Cerebellar Subdural Hydroma.—In the case reported by Grant, acute symptoms of right-sided cerebellar disturbance and of high intracranial pressure developed a few days after a head injury. Burr holes over the right cerebellum and right parietal lobe liberated a subdural hydroma in both places. Symptoms subsided within a week, and the patient has made a good recovery.

Use of Hydantal, a New Anticonvulsive Drug, in Epilepsy.—According to Von Hagen a tablet of hydantal contains 0.1 Gm. of 3-methyl 5.5 phenylethylhydantoin in combination with 0.02 Gm. of phenobarbital. He had the opportunity to try this drug in cases in which previous routine methods of treatment did not give symptomatic improvement or in which there developed a sensitivity to the preparation used. Hydantal alone or in combination with one of the barbiturates was given to 20 patients. Of these 9 received beneficial results, 7 reported no relief and 4 failed to return. One patient reported a dull feeling in her head with three tablets daily. Although the number of cases is small and the results are difficult to evaluate exactly, they do seem to indicate that hydantal is an effective anticonvulsant drug which is remarkably free from undesirable side effects.

Denial of Own Blindness (Anton's Syndrome).—The existence of blindness in patients who deny being blind is also known as Anton's syndrome, Gabriel Anton having called attention to this condition by the publication of 4 case reports in 1898 and 1899. Since then other cases have been reported and Brockman and Von Hagen describe 2 cases of this type. In both there were considerable intellectual deterioration, impairment of memory, disorientation, confabulation and complete blindness apparently due to bilateral involvement of the occipital lobes or the optic radiations. This was shown by necropsy in case 1. Brockman and Von Hagen have no explanation for the apparent relationship between the blindness and deafness noted in case 2. The pathogenesis of denial of blindness is not clearly understood, since in a few cases the blindness has been due to pathologic change in the retinas or in the optic nerves. In general it would appear that the condition is due to a disturbance in the to and fro circuits between the thalamus and the occipital cortex.

California Medicine, San Francisco

65:265-312 (Dec.) 1946

Natural History of Hemolytic Streptococcus Sore Throat. L. A. Rantz.—p. 265.
Treatment of Diseases of Virus Origin. M. D. Eaton.—p. 271.
*Tropical Acne. F. G. Novy Jr.—p. 274.
Some Fundamentals in Estrogen Therapy. S. C. Freed.—p. 277.
Diverticulum of Anterior Urethra: Report of Acquired Type. H. A. Zide and M. S. Siegel.—p. 279.
Indications for Use of Electroshock Treatment of Outpatients. B. Stewart.—p. 282.
Case of Coccidiosis in Man. R. A. Bankowski.—p. 284.
Rheumatoid Spondylitis: Its General Features and Management. E. W. Boland.—p. 285.

Tropical Acne.—According to Novy the term "tropical acne" arose during the war to describe those cases of acne vulgaris which were seen so frequently in the military personnel serving in the hot climates. These cases accounted for 28.5 per cent of the dermatologic cases sent home from overseas. It was seen mostly in those having suffered from previous, usually mild, acne vulgaris. It differs from acne vulgaris of the temperate zones in its rapid development, and it is of a deep cystic, indurated type which leaves mutilating scarring. Tropical acne is seen most frequently on the back, shoulders and neck, whereas the usual acne vulgaris most commonly involves the face. Excessive heat which overstimulates the sebaceous glands appears to be the chief factor in the development of tropical acne. The recent war has shown that those with acne vulgaris should not be sent to the tropics because, with many, the disease is aggravated and severe scarring results.

Canadian Journal of Public Health, Toronto

37:435-480 (Nov.) 1946

*BCG Vaccination in Hospitals and Sanatoria of Saskatchewan: Study Carried Out by National Research Council of Canada. R. G. Ferguson.—p. 435.
New Frontiers in Health Education. I. V. Hiscock.—p. 452.
Industrial Hygiene Program in Agricultural Province. H. Malcomson.—p. 458.
Studies of Serology of Typhus Fever: III. Weil-Felix Test and Complement Fixation with Proteus OX19 Following Typhus Fever Infection and Vaccination. M. Elizabeth Malcomson and F. O. Wishart.—p. 461.

BCG Vaccination in Hospitals and Sanatoriums.—Ferguson says that when the breakdown of persons caring for the tuberculous sick became particularly noticeable in Saskatchewan in the early thirties it was decided to introduce periodic tuberculin testing and x-raying of nurses and employees in the larger hospitals and sanatoriums. After five years of study it was evident that by far the highest incidence of tuberculosis occurred among exposed persons who had been negative to tuberculin on entering the infectious environments. A coincidental experiment in the protection of Indian infants by BCG vaccination suggested that an attempt be made to afford a similar protection to unavoidably exposed nurses and sanatorium employees by means of BCG vaccination. BCG vaccination of nurses negative to tuberculin on entrance reduced the number of cases of manifest tuberculosis among this group to a fourth, and among sanatorium employees the results were even more favorable. Thus, although BCG is not a 100 per cent effective prophylactic, its protection is very considerable. In the vaccinated group the lesions were less extensive than in the nonvaccinated.

Connecticut State Medical Journal, Hartford

10:971-1064 (Dec.) 1946

Clinical Use of Penicillin and Streptomycin. C. S. Keefer.—p. 973.
Clinical Application of Knowledge of Rh Factors. J. M. Freiheit.—p. 975.
Effect of Pulmonary Disease on Heart, with Special Reference to Cor Pulmonale. M. Dressler.—p. 983.
Nature and Growth of Child Care Problem. R. J. Smith.—p. 991.
Liberal Education and Its Relation to Medicine. G. K. Funston.—p. 994.
Connecticut Plan for Medical Care of Veterans. H. T. Wood.—p. 998.

Experimental Medicine and Surgery, Brooklyn

4:289-356 (Nov.) 1946

Pharmacologic Studies of Effects of Clavatin. A. Schweitzer.—p. 289.
Value of Alkali Reserve Test in Obstetrics and Gynecology. A. Sadovsky and R. M. Heifetz.—p. 306.
*Intrauterine Use of Sulfanilamide. A. Sadovsky, Y. M. Bromberg and Z. Polishuk.—p. 310.
Extrasystoles in Experimentally Produced Hypertension. B. Kisch.—p. 319.
Action of Prostigmine in Nutritional Muscular Dystrophy of Vitamin E Deficiency. G. J. Martin.—p. 326.
Rejection by Dogs of Methylcholanthrene Implanted Beneath Superficial Fascia. R. M. Mulligan.—p. 333.
Systemic and Local Effects of Thyoglycolic Acid and Bisulfite Compounds. F. Reiss and B. Gerstl.—p. 338.

Intrauterine Use of Sulfanilamide.—Sadovsky and his co-workers studied the effect of sulfanilamide during and after intrauterine intervention in 77 cases. The local bacteriostatic action due to high local concentration has been studied by cultures taken from the uterus before and after the application of sulfanilamide in 14 cases; in 11 cases the bacteriostatic effect could be demonstrated. It has been observed that sulfanilamide, when applied into the uterine cavity, reaches its maximal blood level three to six hours after the application, and it may be found in the blood stream even after twenty-four hours. This has been observed to occur in the uterus at term after removal of the placenta and in the early months of pregnancy after removal of placental rests as well as after diagnostic curettement. The absorbability of a pregnant uterine wall is better than that of a nonpregnant uterus, and it is especially high in the uterus at term. Sulfanilamide is absorbed better through the uterine wall than from a surgically produced wound. Absorption from the uterus also compares favorably with absorption after oral administration. In 50 patients with various clinical conditions the prophylactic use of sulfanilamide proved to be of special value in manual removal of the placenta, in cesarean section and in hysterotomy for submucous myoma, while it was used also as a therapeutic measure in cases of septic abortion and chronic endometritis.

Gastroenterology, Baltimore

7:393-510 (Oct.) 1946

*Laboratory Aids in Diagnosis and Management of Infectious (Epidemic) Hepatitis: Analysis of Results Obtained by Studies on 34 Volunteers During Early and Convalescent Stages of Induced Hepatitis. J. R. Neefe and J. G. Reinhold.—p. 393.
*Treatment of Postoperative Biliary Dyskinesia: Report of 8 Cases of Endocholedochal Sphincterotomy. R. Colp.—p. 414.
Nutritional Deficiency as Probable Cause of Hepatic Damage in Repatriated Prisoners of War. L. J. Meinenberg and A. M. Snell.—p. 430.
*Amino Acid Alimentation in Gastrointestinal Diseases. J. H. Remington, J. A. Bargen and J. S. Lundy.—p. 442.
History of Hemorrhage in Peptic Ulcer. S. A. Wilkinson and M. L. Tracey.—p. 450.
Relationship of Trauma to Perforation of Peptic Ulcer. B. B. Crohn, M. O. Rouse and H. W. Smith.—p. 456.
Hypertrophic Pyloric Stenosis in Adult. M. G. Vorhaus.—p. 464.
Effect of B Vitamins on Intestinal Absorption and Food Utilization: I. Studies in Rats on Diets Deficient in Certain B Vitamins and During Recovery from Such Diets. T. L. Althausen, J. J. Eiler and Mabel Stockholm.—p. 469.

Laboratory Aids in Infectious Hepatitis.—Neefe and Reinhold applied a group of hepatic tests at frequent intervals to 34 volunteers before, during and after infectious (epidemic) hepatitis induced by oral or parenteral inoculation with materials containing a virus that had been responsible for an epidemic in a Pennsylvania summer camp. Tests that were among the most prompt and consistent indicators of the initial hepatic disturbance often were of little value in detecting persistent hepatic disturbance in the convalescent stage of the disease. In early (preicteric) infectious hepatitis the sulfobromophthalein, Harrison spot (urine bilirubin), cephalin cholesterol flocculation, 1′ serum bilirubin and thymol flocculation tests, becoming positive in the order named, were found to provide the earliest evidence of hepatic disturbance. The methylene blue (urine bilirubin), total serum bilirubin, colloidal gold, urine urobilinogen, thymol turbidity and qualitative van den Bergh tests responded either later or less consistently in early hepatitis. During the convalescent stage the thymol (flocculation and turbidity) test was found to be the most consistent indicator of persistent disturbance with the colloidal gold, cephalin cholesterol flocculation, 1′ serum bilirubin and sulfobromophthalein tests following in order of decreasing consistency. The total serum bilirubin, urine urobilinogen and urine bilirubin tests frequently gave normal results in spite of persistent hepatic disturbance revealed by the other procedures. Considerable variation in the response to these tests was noted in individual cases. Because of the variability of response with the stage of the disease and with individual patients, the routine use of a group of tests is essential for the detection of mild hepatic disturbance at any stage of the disease. A group composed of the sulfobromophthalein, total and 1′ serum bilirubin, urine bilirubin and urobilinogen, cephalin cholesterol flocculation and thymol (turbidity and flocculation) procedures appears to constitute the most reliable group of tests for this purpose.

Postoperative Biliary Dyskinesia.—Colp discusses the treatment of biliary dyskinesia and presents reports on 8 patients in whom an endocholedochal sphincterotomy had been performed. Six have shown improvement and have been relieved of their troublesome symptoms. One patient has had occasional slight epigastric distress during her menstrual period, while another has had recurrence of colic after nineteen months of absolute freedom from attacks. Surgical section of the sphincter usually causes permanent paralysis. Because of a recurrence of symptoms in 1 patient it may be advisable in the future to divide the sphincter in two separate planes. Evidently the scar resulting from the sphincterotomy has never caused a secondary contraction of the papilla resulting in stenosis and biliary stasis.

Amino Acid Alimentation.—Remington and his associates say that for ten years intermittently preparations of amino acids have been used at the Mayo Clinic. They have been administered in the form of digests of various proteins parenterally and orally in several intestinal diseases, such as ulcerative colitis, regional enteritis, enterocutaneous fistula and ileal stoma, gastrojejunocolic fistula, sprue and pancreatic insufficiency. Oral administration has been shown to be preferable as far as utilization of nitrogen is concerned. Some patients can drink 250 cc. of 20 per cent solutions of amino acids such as parenamine or amigen several times a day. However, the taste is not pleasant and few can do this. Palatable products are being perfected and comparative nitrogen balance studies are being carried out. Too rapid intravenous administration of most of the available protein digests will cause nausea and vomiting. In order to prevent these effects at least three hours should be taken to administer each liter. The authors conclude that amino acids administered orally or parenterally are nutritionally beneficial as a protein substitute when sufficient food cannot be ingested or absorbed.

Georgia Medical Association Journal, Atlanta

35:343-420 (Dec.) 1946

One Year's Experience with Mobile X-Ray Unit. A. J. Davis.—p. 343.
Paratyphoid B Meningitis in Infant: Report of Case. L. R. Massengale.—p. 345.
Surgical Management of Obstructive Prostate. G. J. Bridges.—p. 347.
Advancement in Treatment of Common Infection in Lungs. A. Worth Hobby.—p. 350.
Tuberculosis in Private Practice. C. C. Aven.—p. 357.
Social, Prophylactic, Medical and Surgical Aspects of Bronchiectasis. O. A. Abbott.—p. 360.
*Superior Sulcus Pulmonary Tumor (Pancoast Syndrome). J. E. Walker.—p. 264.
Some Nonspecific Factors Inducing Asthma, and Their Treatment. J. L. Jacobs.—p. 365.
Magnetic Removal of Foreign Bodies from Food and Air Passages. M. Equen.—p. 368.

Superior Sulcus Pulmonary Tumor (Pancoast Syndrome).—An accountant aged 56 had had pain in the shoulder for about a year. One month prior to consultation he had been obliged to give up his work on account of inability to write. He had lost 20 pounds (9 Kg.). Examination showed barely perceptible fulness above the right clavicle and indefinite dulness on percussion above and below the clavicle. The right pupil was about twice the diameter of the left. The sputum was negative for tubercle bacilli. A diagnosis of malignant tumor of the Pancoast type was made. Removal of the tumor was impossible. A biopsy specimen showed that the tumor was a bronchiogenic carcinoma of the squamous cell type. Death occurred fourteen days after the operation. Walker stresses that a superior sulcus pulmonary tumor (Pancoast syndrome)

is characterized by intractable shoulder girdle pain, by an x-ray opacity at the pulmonary apex and frequently by Horner's syndrome and rib erosion. Of these, the most important features are the pain and the x-ray opacity.

Journal of Clin. Endocrinology, Springfield, Ill.

6:707-768 (Nov.) 1946

*Is Endemic Goiter Due to Lack of Iodine? I. Greenwald.—p. 708.
Effect of Oral Thyroid Medication on Prothrombin Time. S. Shapiro.—p. 742.
*Extreme Insulin Resistance: Case Study. T. H. McGavack, S. D. Klotz, Mildred Vogel and J. F. Hart.—p. 747.
Myxedematous Dropsy: Report on Case of Myxedema with Congestive Heart Failure and Serous Effusions with High Protein Content. J. C. Mussio-Fournier, J. M. Cerviño and J. J. Bazzano.—p. 758.

Is Endemic Goiter Due to Lack of Iodine?—The hypothesis that lack of iodine is an important factor in endemic goiter has been subjected by Greenwald to a critical examination. He stresses that the evidence that there is a deficiency in the iodine intake in goitrous regions is faulty in that the proponents of this view have not properly controlled their analytical technic. Different varieties of the same vegetables, grown on the same soil and at the same time, show a greater variation in their iodine contents than the differences claimed to exist between foods produced in goitrous and nongoitrous areas. A negative correlation between the weights of the thyroids and their iodine contents could not be demonstrated in any one of twenty-three series of analyses by seventeen different observers. Such correlation as has been found to exist is positive, the larger glands tending to contain the larger amounts of iodine. Persons with goiter do not show a low metabolic rate, the usual sign of thyroid insufficiency. Goiters have been produced in rats on certain iodine poor diets, but the addition of such small quantities of iodine as are found in ordinary diets has not prevented the enlargement of the thyroids. Glands of normal size and microscopic appearance have been obtained in rats on such diets only by the use of much larger amounts of iodine. The prophylactic administration of iodine to human beings has not reduced the incidence of new goiters to zero. In fact, in some cases there has been an increase in the incidence. Greenwald concludes that endemic goiter is not due to a lack of iodine.

Extreme Insulin Resistance.—A man with mild diabetes had three distinct episodes of extreme insulin resistance, each of which was associated with local and general allergic reactions to insulin. During the third and last refractory period reagins were found in the blood. There was no evidence of any antibodies in the circulation having a direct anti-insulin effect. McGavack and his associates feel that the fact that the patient had a cirrhotic liver during the entire period and a retention cyst of the pancreas in the last attack points to a possible hepatopancreatic abnormality as an additional factor in producing and maintaining the insulin resistant state.

Journal of International College of Surgeons, Chicago

9:655-782 (Nov.-Dec.) 1946

Application of Cutis Graft to Various Types of Reconstructive Surgery. J. E. Cannady.—p. 655.
Surgery of Splenic Tumors. M. Behrend.—p. 664.
Retropharyngeal Abscess in Adults: Review of Literature and Report of Case. M. Thorek and M. M. Schapiro.—p. 671.
*Psychosurgery for Relief of Unbearable Pain. J. W. Watts and W. Freeman.—p. 679.
Acute Gallbladder Disease in the Aged. S. J. Carnazzo.—p. 705.
Case of Peritonitis Calcificans et Ossificans in Unusual Location. H. Nohteri.—p. 712.
*Fine Chromic Catgut versus Cotton Sutures in Wound Closure. G. A. Stevens, H. P. Sloan, W. A. Wickham and T. P. Foltz.—p. 716.
Preoperative Considerations in Toxic Goiter. U. G. Dailey.—p. 720.
Clinical Evaluation and Analysis of 268 Cases of Pelvic Infection. I. Tractenberg.—p. 724.
Perthes Test and Its Practical Utilization: Use of Elastic Garter in Selected Cases of Varicosities. E. J. Orbach.—p. 730.
Anatomosurgical Concept of Parathyroids. M. A. Manzanilla.—p. 755.
Surgical Treatment of Acute Cholecystitis in the Aged. S. J. Carnazzo.—p. 764.

Psychosurgery for Relief of Unbearable Pain.—Among the 360 patients with nervous and mental disease on whom Watts and Freeman performed lobotomies there were some whose complaints of pain appeared excessive. Following lobotomy not only was there a disappearance of the anxiety, apprehension and nervous tension but the unceasing complaints of pain were no longer heard. This led the authors to employ psychosurgery for the relief of unbearable pain. Six of the 9 patients presented had mental disorders. All of these complained of severe, unbearable pain. Three of the 6 had demonstrable organic disease but the complaints were out of proportion to the condition. The other 3 had no organic disease. The authors also present 3 patients with severe pain due to radiculitis, carcinoma of the rectum and tabes dorsalis. They conclude that when unbearable pain is one of several symptoms in a mental disorder the complaints of pain disappear along with the nervous reactions following prefrontal lobotomy. When pain due to organic disease becomes unbearable (the disease itself being incurable) and fear of pain becomes as dreadful as pain itself, prefrontal lobotomy is indicated. Psychosurgery alters the individual's reaction to pain without materially changing his ability to feel pain. Pain may be present but when divorced from its implications—the threat to his security and fear of disability and death—it then becomes bearable and may be accepted with fortitude.

Chromic Catgut vs. Cotton Sutures.—Stevens and his associates made a carefully controlled study of 100 consecutive cases. Only operations for nonrecurrent inguinal hernias and for clean appendixes were included. In 50 cases cotton sutures were used and in 50 fine chromic catgut. The results obtained suggest the clinical superiority of fine chromic catgut over cotton in the closure of clean wounds. Early ambulation is not contingent on the type of suture material used. There was no difference in postoperative pain and temperature following the use of fine chromic and cotton sutures.

Journal of Investigative Dermatology, Baltimore

7:269-400 (Dec.) 1946

Mycosis Fungoides Developing in Patient with Congenital Ichthyosiform Erythroderma, Including Consideration of Multiple Neoplastic Processes. H. Beerman and C. C. Thomas.—p. 271.
*Immunologic Studies on Patients Developing Urticaria Associated with Penicillin Therapy. J. L. Callaway and S. W. Barefoot.—p. 285.
Eosinophil Granuloma of Skin. H. M. Buley.—p. 291.
Treatment of Dermatoses with Benadryl (Beta Dimethylaminoethyl Benzhydryl Ether Hydrochloride): Analysis of Its Effects on 170 Patients with Various Dermatoses. L. C. Goldberg.—p. 301.
*Recurrent Vesicular Eruption of Hands Due to Food Allergy. J. M. Flood and D. J. Perry.—p. 309.
Penicillin and Streptomycin in Treatment of Experimental Erysipelothrix Rhusiopathiae Infection of Mice, with Observations on Immunologic Reaction to the Infection. J. V. Klauder and Anna M. Rule.—p. 329.
Treatment of Tinea Capitis with Gliotoxin in Special Plastic Base. Elizabeth R. Constant.—p. 337.
*Cutaneous Diphtheria: Report of 140 Cases. C. S. Livingood, D. J. Perry and J. S. Forrester.—p. 341.
Bacterial Flora of Normal and Infected Skin: Evaluation of Various Methods of Performing Skin Cultures. D. M. Pillsbury and Anna C. Nichols.—p. 365.
Experimental Aspects of Penicillin Sensitization, with Special Reference to Conjoint Sensitization to Superficial Fungous Disease. F. E. Cormia and G. M. Lewis.—p. 375.
Melanin Pigmentation Through the Ages, with Special Reference to Pigmentation of Planarias and Whales, and Histology of Whale Skin. S. W. Becker.—p. 381.

Urticaria Associated with Penicillin Therapy.—Callaway and Barefoot report 5 instances of urticaria associated with penicillin therapy in 2 men aged 26 and 44 and in 3 women between the ages of 17 and 42. The patients were studied for hypersensitivity and for circulating antibodies to sodium penicillin by means of intracutaneous tests, passive transfer tests (including the usual Prausnitz-Kuestner reaction, "distant reaction," and reversed passive transfer tests) and precipitin tests. All intracutaneous and passive transfer tests were negative. The precipitin tests were inconclusive. In the immunologic studies on 2 patients the authors were able to use penicillin identical with that which the patients received therapeutically and to which they had reacted clinically. The immunologic studies on these patients were in no way different from those on 3 patients who had received penicillin of which the manufacturer and lot number were unknown. In all instances the urticaria was controlled by benadryl (beta-dimethylaminoethyl benzohydryl ether). It is suggested that an excessive amount of histamine was present to account for the urticaria, but from the studies reported the urticaria cannot be accounted for on the basis of an antigen-antibody reaction.

Recurrent Vesicular Eruption of Hands.—Flood and Perry report 30 instances of vesicular dermatitis of the hands in 28 men between the ages of 21 and 39 years and in 2 women aged 24 and 26. Food allergens were detected by ingestion while 29 patients were on a strict trial diet. The allergen was detected by having 1 patient keep a food diary. Prompt improvement occurred as soon as the offending foods were withheld and definite reactions occurred on ingesting an offending food. The foods most likely to give a reaction are tuna fish, wheat, milk, tomato, pork, pineapple, American cheese, eggs, lamb, chocolate and chicken. The foods less likely to give a reaction are prunes, beef, cabbage, salmon, tea, pears and lemon.

Cutaneous Diphtheria.—Livingood and his co-workers report 140 instances of cutaneous diphtheria among American soldiers in the North Burma campaign during the summer of 1944. Cutaneous diphtheria is essentially a tropical infectious disease. Mud, insects, leeches and constant maceration of the skin due to excessive sweating made it impossible for the soldiers to maintain an intact cutaneous surface. Except for the rare eczematous forms the disease was primarily an ulcerative process on the skin involving the entire epidermis and the underlying subcutaneous tissue. A grayish, yellowish or brownish grey membrane was seen only at an early stage of the disease, while a black or brownish black adherent leathery slough with a dry outer surface was the important single clinical feature in more than 75 per cent of the patients. Healing always started evenly around the periphery of the lesion and proceeded toward the center, so that the central portion was the very last to epithelize. The resulting scars were quite distinctive. In 20 per cent of the cases spontaneous occurrence of a small bulla in some part of the scar was observed which is of considerable diagnostic significance in diphtheritic ulcers. Unhealed ulcerations became hypesthetic or anesthetic three to five weeks after the onset, and these sensory changes are a diagnostic aid of great importance. The most common site of involvement was on the lower extremities. Almost all the patients required at least four months of hospitalization. Neurologic complications occurred in 34 per cent and cardiac complications in 4.5 per cent of 109 relatively unselected patients in this series. The administration of diphtheria antitoxin (standard dosage of 40,000 units) as long as one month after the onset of the lesions resulted in a low incidence of complications and uneventful healing of the ulcerative lesions.

Journal-Lancet, Minneapolis

66:399-430 (Dec.) 1946

Plasma Proteins in Surgery: Review of Literature. R. O. Quello. —p. 399.
Surgery of Stomach. O. T. Clagett.—p. 403.
Tuberculosis Control in Colleges and Universities. J. A. Myers.—p. 409.
Use of Physostigmine and Neostigmine Therapy in Neuromuscular Dysfunction Caused by Trauma, with Special Reference to Sequelae of War Wounds. J. Goldman and A. Cohen.—p. 415.

67:1-46 (Jan.) 1947

Francis Edward Harrington, Physician, Administrator and Benefactor of Man: Personal Appreciation. J. A. Myers.—p. 2.
Epidemiology of Poliomyelitis. G. W. Anderson.—p. 10.
Immunization Against Pertussis. W. H. Tucker.—p. 14.
Control of Influenza by Immunization. J. E. Salk.—p. 18.
Medical Economics. M. M. Weaver.—p. 24.
Public Health Cancer Control. W. A. O'Brien.—p. 29.
Diphtheria in Minnesota. D. S. Fleming.—p. 32.
Present Status of Tropical and Exotic Diseases Among Servicemen. D. R. Mathieson.—p. 37.

Journal of Nervous and Mental Disease, New York

105:1-106 (Jan.) 1947

Etiology of Dementia Precox: Partial Review of Literature, 1935 to 1945 and Attempt at Conceptualization. L. Bellak and Elizabeth Willson. —p. 1.
Etiology of Depersonalization. I. Galdston.—p. 25.
Twin Studies on Psychopathology of Suicide. F. J. Kallmann and Mary M. Anastasio.—p. 40.
Observations on Use of Phonograph Record of Battle Sounds Employed in Conjunction with Pentothal in Treatment of 14 Cases of Severe Conversion Hysteria Caused by Combat. W. H. Kupper.—p. 56.
Dynamics of Schizophrenia. L. R. Sillman.—p. 61.
Observations on Current Army Psychiatric Problems: Comparison of Outpatient Records of January 1944 and January 1946. J. W. Bick Jr.—p. 73.
Meralgia Paresthetica: Age Incidence. J. M. Schneck.—p. 77.

Journal of Pediatrics, St. Louis

29:677-802 (Dec.) 1946

Detection of Susceptibility to Whooping Cough: I. Institutional Experiences with Pertussis Agglutinogen as Skin Test Reagent. Harriet M. Felton and E. W. Flosdorf.—p. 677.
*Id.: II. Clinical Standardization of Diagnostic Skin Test Reagent and Its Use in Institutional and in Private Practice. Harriet M. Felton, J. Smolens and S. Mudd.—p. 687.
Hypofunction of Adrenals in Early Life. J. C. Jaudon.—p. 696.
*Intra-Articular Penicillin Treatment of Suppurative Arthritis in Infants and Children. J. L. Tucker and W. R. Tepper.—p. 711.
Dynamics of Newly Born Babies. Catharine Knop.—p. 721.
Some Effects of Injected Cytochrome C in Myocardial and Cerebral Anoxia in Man. S. Proger and D. Dekaneas.—p. 729.
*Pneumococcus Meningitis in Infants and Children: Report on Use of Combined Sulfonamide and Penicillin Therapy. S. Ross and F. G. Burke.—p. 737.
*Intravenous Alimentation of Infants. Katharine Dodd and S. Rapoport. —p. 758.
Retrolental Fibroplasia. T. L. Terry.—p. 770.
Mucous Cyst at Base of Tongue as Cause of Sudden Death in an Infant: Report of Case. L. Whittier and E. F. Dombrowsky.—p. 774.

Standardization of Skin Test Reagent for Whooping Cough.—Felton and her associates compared the agglutinogen of phase I Hemophilus pertussis prepared by a method of chemical extraction with the sonic extracted material which has been shown to be a satisfactory skin test agent for susceptibility to pertussis. The acid extracted agglutinogen was standardized against the sonic product and found to be more potent and to give more clearcut reactions. Review of these data showed that a twenty-four hour reading time could be recommended. This agglutinogen gives results identical with those obtained with the sonic extracted material; there is no reaction even in large doses in normal (susceptible) persons and an allergic reaction at the site of injection in any individual with solid immunity to whooping cough from either immunization or previous attack of the disease. In an institution with annual outbreaks of whooping cough the use of agglutinogen before the anticipated epidemic was followed by a significant decrease in the number of cases, all of which occurred in the group predicted by the skin test to be susceptible. Yearly skin testing of new students followed by immunization of all susceptible children has resulted thus far in the absence of whooping cough from this school. The use of agglutinogen has a place as a public health measure in periodic examinations of young children.

Intra-Articular Penicillin in Suppurative Arthritis in Children.—Tucker and Tepper report 4 cases of suppurative arthritis in infants and children in which surgical intervention was not required. Three were in the acute stage of the disease and 1 in the chronic stage, and adjacent osteomyelitis was present in 3. All were treated by joint aspiration and intra-articular instillation of penicillin. Supplemental therapy consisted in intramuscular penicillin in all, oral sulfadiazine in 3, transfusions and physical therapy. Three surviving patients were seen after discharge at three, nine and twelve months respectively, with complete return of function in the last 2 and without recurrence in any. Intra-articular penicillin therapy alone in large dosage may be adequate.

Combined Sulfonamide and Penicillin in Pneumococcic Meningitis in Children.—In studies on 19 infants and children with pneumococcic meningitis treated with sulfadiazine and penicillin Ross and Burke found that penicillin should be administered both intramuscularly and intrathecally to achieve therapeutic spinal fluid penicillin concentrations. The combination with sulfadiazine appears to offer advantages over penicillin alone. Therapy should be continued for at least eight to twelve days after sterilization of the spinal fluid. Type specific antiserum was administered only to the first 7 of the 19 patients receiving combined sulfonamide-penicillin therapy. There were 6 recoveries and 1 death among the 7 receiving antiserum; and there were 10 recoveries and 2 deaths among those who did not receive antiserum. The series is too small to appraise the value of antiserum. The importance of the early institution of therapy in pneumococcic meningitis cannot be overemphasized. If all the measures in present day therapy are brought to bear as quickly and as vigorously as possible, the prognosis, even in the infant age group, is relatively good.

Intravenous Alimentation in Infants.—Dodd and Rapoport report administration to infants by venoclysis of the needed elements of nutrition for periods up to fifteen days. Most of the children had chronic or recurrent diarrhea and vomiting. The aim was to supply adequate fluid and salts and at least maintenance amounts of calories and protein. A total fluid intake of 150 cc., 50 calories and 2 Gm. of protein per kilogram of body weight was elected. The saline value was calculated on the basis of Butler's figures as 80 cc., with an addition of 5 cc. for each kilogram of body weight. In malnourished infants the attempt was made to furnish sufficient protein and calories to produce weight gain. It was shown that maintenance of fluid and electrolyte equilibrium by parenteral fluid administration is possible even in small infants during periods of partial or total withdrawal of oral feeding. With the use of dextrose, whole blood, plasma and casein hydrolysate a gain in weight may be achieved. A daily record of total intake of fluid, saline, calories and nitrogen is an essential prerequisite. Premature and very young infants require less saline in proportion to their body weight than do older infants. Contamination of the casein hydrolysate, infection at the site of needle punctures and thrombosis of the veins present a considerable problem, but by the use of a closed system of administration the more serious difficulties have been almost completely overcome. Thrombophlebitis and wound infection continue to be troublesome.

Southern Medical Journal, Birmingham, Ala.

39:921-1004 (Dec.) 1946

*New Hemostatic Dressings in Anorectal Surgery. C. Rosser.—p. 921.
Mongolism: An Objective Early Sign. H. Cummins and R. V. Platou.—p. 925.
Intrathoracic Esophagojejunostomy for Lesions of Upper Third of Esophagus. W. F. Rienhoff Jr.—p. 928.
Talonavicular Synostosis. F. G. Hodgson.—p. 940.
Impact of Scientific Progress on Economics of Medical Care. H. H. Shoulders.—p. 942.
Left Shift of Medical Practice. C. W. C. Moore.—p. 946.
*Recognition of Certain Forms of Congenital Heart Disease Amenable to Surgical Treatment. Gladys J. Fashena.—p. 948.
Hysterectomy: Study of 607 Cases. C. H. Tyrone, C. G. Collins, J. C. Weed, R. F. Zeigler Jr. and J. B. Crawford.—p. 957.
Biliary Tract Surgery: Inquiry into Reasons for 33 Deaths in 453 Operations. J. T. Sanders and W. R. Wilkinson.—p. 961.
Role of Surgical Treatment in Management of Hypertension. E. M. Isberg and M. M. Peet.—p. 966.
*Preliminary Observations on Use of Melarsen Oxide in Malaria. E. H. Payne, E. Balthazar and D. A. Bezerra.—p. 970.
*Further Experience with Melarsen Oxide (A New Arsenical) in Treatment of Tropical Disease. E. H. Payne, E. Balthazar and J. S. Fernandes.—p. 972.
Tuberculin Testing in Birmingham, Ala., and Questions Raised Concerning Tuberculosis Control Program. Ruth Berrey, Berta Fridley and Thyra Christensen.—p. 976.
Portal Cirrhosis in the Obese. W. H. Kelley.—p. 978.
Hypoplastic Anemia Improvement Following Splenectomy. L. Levy II and P. Pizzolato.—p. 981.
Shifting Dulness in Abdomen. W. R. Moses.—p. 985.

New Hemostatic Dressings in Anorectal Surgery.—Rosser presents the results of a clinical investigation involving the application of gelatin sponge, oxidized cotton and oxidized gauze to surgical procedures in and about the anal canal. He concludes that these absorbable hemostatic materials apparently satisfy the criteria for desirable postoperative anal dressings. Their effectiveness as hemostatic agents is demonstrated by the absence of primary hemorrhage in 117 anorectal hospital procedures. The materials should be applied as small single dressings to the individual wounds and not inserted as occluding packing.

Congenital Heart Disease Amenable to Surgical Treatment.—The three types of congenital heart disease discussed by Fashena are coarctation of the aorta, patent ductus arteriosus and pulmonary stenosis or pulmonary atresia. The surgical correction of coarctation of the aorta and of pulmonic stenosis is still in the experimental stage, and no predictions can be made concerning the long term results of these operations. All three of the operative procedures require the utmost skill in intrathoracic surgery as well as specialized technics in anesthesia. For these reasons it is desirable that cardiac surgery be confined for the present to large medical centers where the requisite study can be given to these patients and where follow-up data can be accumulated more advantageously.

Melarsen Oxide in Malaria.—Fifty-eight unselected cases of malaria were treated in public clinics with intravenous melarsen oxide. Twenty-five mg. was given daily with the intention of completing a series of seven consecutive injections. Forty of these completed the series of injections. The symptoms subsided on or about the fourth or fifth day of treatment. Upper abdominal tenderness disappeared and enlarged spleens became gradually reduced in size in chronic cases. Five patients either experienced a relapse or acquired a reinfection. Payne and his associates conclude that melarsen oxide will cause remission and possible cure of malarial infection.

Melarsen Oxide (New Arsenical) in Tropical Disease.—Payne and his associates were engaged in maintaining a medical and health program for workers and their families engaged in production of quartz and mica in the states of Minas Gerais and Goyaz, Brazil. There was a complete lack of proper food, housing and sanitation. The health of the population was extremely poor. Malaria was present in pandemic form. Tropical ulcer caused an economic loss second only to malaria. In northern Goyaz, Leishmaniasis incapacitated many for work. Dysentery, both amebic and bacillary, was common. Hookworm was pandemic, and epidemics of typhoid and smallpox roamed throughout the entire region. Refrigeration was not available in this territory, and it was necessary to use drugs unaffected by the deteriorating effects of heat and moisture. Melarsen oxide is a stable trivalent arsenical compound. The drug was given by intravenous injection and was free from toxic reactions. Tropical ulcer was found to respond well to melarsen oxide therapy. Pain and induration subsided rapidly. Healing time decreased by 50 per cent or more. Frambesia in its secondary stage responds rapidly to intravenous melarsen oxide therapy. Results compared favorably with those obtained with mapharsen.

Western J. Surg., Obst. & Gynecology, Portland, Ore.

55:1-80 (Jan.) 1947

Histophysiology of the Thyroid. J. Wahlberg.—p. 1.
Some Factors in Metabolism of Iodine by Thyroid Gland. W. P. VanderLaan and J. E. VanderLaan.—p. 10.
Circulating Thyroid Hormone in Blood and Lymph. W. T. Salter.—p. 15.
What Has Thiouracil Taught Us About Pathologic Physiology of Graves' Disease? R. W. Rawson and Janet W. McArthur.—p. 27.
*Thiouracil: Preoperative Use in 400 Patients with Severe Hyperthyroidism. E. C. Bartels and G. O. Bell.—p. 39.
Status of Thiouracil in Treatment of Toxic Goiter. W. O. Thompson, P. K. Thompson and D. M. Mandernach.—p. 50.

Thiouracil in Hyperthyroidism.—Bartels and Bell used thiouracil at the Lahey Clinic in the preoperative preparation of 400 patients with severe hyperthyroidism, 338 of whom had primary hyperthyroidism while 62 had toxic adenomatous goiter. These patients represent about 35 per cent of those having thyroidectomy for hyperthyroidism during the last three years. One hundred and fifty-seven patients (39 per cent) were over 50 years of age and 53 (12 per cent) were over 60; 150 patients (37 per cent) had hyperthyroidism of over two years' duration; 211 patients (52 per cent) had lost more than 20 pounds (9 Kg.) and 40 (10 per cent) had lost more than 50 pounds (22.7 Kg.); 209 patients (52 per cent) had initial basal metabolic rates greater than +50. Thiouracil was administered in a daily dose of 0.6 Gm. given in three fractional doses of 0.2 Gm. This daily dose was continued during the entire time of treatment. Patients with primary hyperthyroidism of less than six months' duration who have not received iodine respond more readily and patients with adenomatous goiter having received previous iodine respond very slowly; consequently the duration of thiouracil treatment must be individualized. Only 35 among the 400 patients developed a reaction during thiouracil administration. Irrespective of the type and the severity of hyperthyroidism or degree of physical depletion, patients adequately treated with thiouracil were actually restored to a normal state of health before thyroidectomy was done. Experience indicates that subtotal thyroidectomy can be done with greatly reduced risk and hyperthyroid reactions during anesthesia and after operation can be eliminated completely. There was one postoperative death and one death from agranulocytosis due to thiouracil, a mortality of 0.5 per cent.

FOREIGN

An asterisk (*) before a title indicates that the article is abstracted below. Single case reports and trials of new drugs are usually omitted.

Australian and New Zealand J. Surgery, Sydney

16:1-88 (July) 1946

Culture of Human Life. J. H. L. Cumpston.—p. 3.
*Surgical Hazards in Treatment of Cholecystitis and Cholelithiasis. J. B. G. Muir.—p. 14.
Surgical Treatment of Myomata of Uterus, with Particular Reference to Myomectomy. L. W. Gleadell.—p. 30.
Secondary Hemorrhage. W. A. Hailes.—p. 39.
Fluid Balance Chart. C. Gale.—p. 44.
Miller-Abbott Tube in Treatment of Ileus. N. R. Wyndham.—p. 62.

Surgical Hazards in Cholecystitis and Cholelithiasis.—Muir says that when surgical treatment is carried out for gallbladder disease in the absence of inflammation and complications it is attended with a low mortality rate of 2.15 per cent. When the gallbladder is inflamed the mortality rate for surgical treatment rises sharply to 18.4 per cent. In the presence of common duct stones, with or without jaundice, the mortality rate was 20.5 per cent. The controversial question of the best time for operation in cases of acute cholecystitis is discussed. From 5 per cent to 20 per cent of cases of acute chelocystitis will not subside and progress to gangrene and perforation. In these cases conservative surgery at an early stage will diminish the risk.

British Medical Journal, London

2:931-974 (Dec. 21) 1946

*Survey of Outcome of 20 Cases of Hemophilus Influenzae Meningitis Related to Bacterial Type. K. Zinnemann.—p. 931.
Infections of Nervous System Occurring During Epidemic of Influenza B. A. D. Leigh.—p. 936.
Allergic Reactions to Penicillin. A. L. Suchecki.—p. 938.
Neuromyelitis in Mumps. R. E. Church.—p. 941.
Conservative Treatment of Acute Perforated Peptic Ulcer. A. Hedley Visick.—p. 941.
Inoculation Experiments Against Typhus in Afghanistan. Z. Berke.—p. 944.

Outcome of Hemophilus Influenzae Meningitis Related to Bacterial Type.—Zinnemann presents reports of 20 cases of Hemophilus influenzae meningitis in which various methods of treatment were employed. The survey is the result of inquiries made at hospitals from which strains of H. influenzae were received for typing. The first point emerging from this survey is that reports of H. influenzae meningitis occurring in 20 children, of which 19 were caused by Pittman's type b and the twentieth by H. influenzae of the respiratory group, could be collected in a small area in less than two years. This would seem to indicate that the condition is not as rare as the scarcity of case reports indicates. The second point is the varied nature of the symptoms. Of 5 children treated only with sulfonamides, 1 recovered. Fifteen children had combined sulfonamide and penicillin treatment, and of these 8 recovered. In view of the good results reported from specific H. influenzae type b rabbit serum, the author thinks that this should be given in addition to the combined sulfonamide and penicillin treatment.

J. Obst. & Gynaec. Brit. Empire, Manchester

53:405-484 (Oct.) 1946

Superiority of South African Negro or Bantu as Parturient. O. S. Heyns.—p. 405.
The Blood in Pregnancy: Part I. Hemoglobin Level. M. H. Roscpe and G. M. M. Donaldson.—p. 430.
Stillbirth and Neonatal Death: Clinicopathologic Study. Mary Evans and G. S. Smith.—p. 440.
*Primary Carcinoma of Fallopian Tube: Report of 4 Cases. G. Bancroft-Livingston.—p. 453.
*Weather Changes and Eclampsia. N. Sapeika.—p. 461.

Primary Carcinoma of Oviducts.—Bancroft-Livingston presents the histories of 4 patients with carcinoma of the uterine tube and analyzes 33 cases that were collected from the literature. He emphasizes the difficulty of diagnosis and the bad prognosis in almost all cases. In none of the 4 reported cases was a correct clinical diagnosis made, and only twice in the collected group of 33. The difficulty of preoperative diagnosis does not seem amenable to resolution until the condition is more frequently borne in mind by clinicians, and doubtful cases in which symptoms persist after palliative treatment are subjected to laparotomy. Hysterosalpingography may occasionally be of value in differential diagnosis. Radical surgery is undoubtedly the best treatment.

Weather Changes and Eclampsia.—Since many obstetricians are of the opinion that a change in the weather may be of importance in the development of eclampsia, Sapeika investigated this factor in 45 cases of eclampsia that were observed in Cape Town, where eclampsia is comparatively frequent. Season itself does not appear to have any influence and, as far as weather changes are concerned, correlation could not be found between the onset of antepartum eclampsia and meteorologic factors.

Lancet, London

2:891-930 (Dec. 21) 1946

*Pneumonoconiosis in South Wales Anthracite Miners. C. G. Gooding.—p. 891.
*Steep Wave Electroplexy. E. B. Strauss and A. MacPhail.—p. 896.
Psychotherapy of Ulcerative Colitis. R. West.—p. 899.
*Folic Acid in Tropical Sprue: Report of Case. P. Manson-Bahr and W. Clarke.—p. 903.
Sauerbruch Cineplastic Amputation. R. K. Magee.—p. 904.
Retinal Mechanism of Vision. F. W. Edridge-Green.—p. 906.

Pneumonoconiosis in Anthracite Miners.—This report by Gooding is based partly on clinical experience provided by examination of many hundreds of anthracite miners during the last twenty years and partly on the necropsy findings in 592 deaths among patients with silicosis. Associated tuberculosis was present in nearly a fourth of 592 certified miners who died and in 28 per cent of 516 silicotic deaths. Tuberculosis which accompanies pneumonoconiosis often lacks its usual features, and it is probable that more detailed investigation would reveal tuberculosis in a much greater proportion of silicotic miners. Emphysema was another common accompaniment of advanced silicosis, and it is responsible for much of the disablement in these men. About half of the silicotic deaths were due to cardiac failure and half to infection, chiefly tuberculosis. Signs of embarrassment of the right side of the heart were often found in the men with more advanced pulmonary lesions. This series of cases offers no evidence that there is an increased incidence of primary lung cancer in pneumonoconiotic anthracite miners. Men with clinically recognizable tuberculosis have a particularly poor prognosis, but many of those certified in the early stage survive for many years.

Steep Wave Electroplexy.—According to Strauss and MacPhail the object of the steep wave type of electroplexy or electric convulsion therapy is to produce therapeutic convulsions with minimal discomfort to the patient, minimal damage to nervous tissues, minimal disagreeable after-effects and minimal risk of extraneous accidents. The authors briefly review their previous work on electroplexy to indicate the factors which led them to construct a new type of apparatus. The technical and electrophysiologic advantages of steep wave current derived from condenser discharge are assessed against the effects of currents with other wave forms of lower frequencies (including simple alternating currents). The authors describe the construction of the apparatus and its use and outline the clinical advantages to be expected from steep wave electroplexy.

Folic Acid in Tropical Sprue.—Manson-Bahr and Clarke present a case of tropical sprue which had resisted the usual treatment for two years. After 10 mg. of folic acid had been given by mouth daily for five days there was a great improvement, which was maintained after the folic acid was discontinued. Perhaps folic acid may provide the switch by which the vicious circle of these diseases can be reversed, after which further recovery can continue without its aid.

Medical Journal of Australia, Sydney

2:757-788 (Nov. 30) 1946

Fundamental Principles in Medical Practice. A. E. Coates.—p. 757.
Malaria Survey at Wewak, New Guinea. I. M. Mackerras and J. E. C. Aberdeen.—p. 763.
Primary Carcinoma of Jejunum, with Report of Case with Fourteen Months' Survival to Date. J. L. Deacon.—p. 771.

Lyon Chirurgical, Paris

41:385-512 (July-Aug.) 1946

Effects of Vascular Lesions on Lesions of Peripheral Nerves. P. Wertheimer.—p. 385.
Surgical Eventualities in So-Called "Medical" Icterus. P. Mallet-Guy and R. Jeanjean.—p. 389.
Chronic Pancreatitis and Diabetes Mellitus. A. Guibal and A. Courty. —p. 407.
*Acute Calculous Cholecystitis in Children. C. Clavel and J. Dumas. —p. 411.
Penicillin in Treatment of Acute Osteomyelitis. L. Tavernier and Lanier.—p. 430.
Recklinghausen's Disease: Removal of Parathyroid Adenoma. P. Mallet-Guy, J. Feroldi and J. Sautot. —p. 439.

Cholecystitis in Children.—Clavel and Dumas report 2 instances of acute calculous cholecystitis in boys aged 7 and 8. They also report data on 102 cases of biliary lithiasis in children between the ages of less than 1 and 15 years, 32 of whom were boys, 48 girls and 22 not specified. A clinical study of 22 cases is presented. The incidence of biliary lithiasis is higher among boys than among girls before the age of 10 years. It is often associated with appendicitis and consequently may not be recognized. One should think of cholecystitis when one is about to establish a diagnosis of subhepatic appendicitis. The gallbladder may often be felt on palpation under anesthesia at the start of the intervention, even if it could not be palpated on preoperative clinical examination.

Presse Médicale, Paris

54:697-716 (Oct. 26) 1946

Mechanism of Bile Production in Organism. H. Bénard, A. Gajdos, M. Polonovski and M. Tissier.—p. 697.
Possibility of Prolonged Infusion of Penicillin by Way of Sternum. G. Giraud and T. Desmonts.—p. 698.
Statistical Study on Results of Penicillin Therapy. A. Chevallier, C. Vaille, P. Chassagne and M. Giraud.—p. 698.
Influence of Anesthesia with Pentothal on Blood Coagulation. A. Sicard, C. Nordmann and Y. Sibaud.
*Penicillin Treatment in Hospital in 250 Women with Gonorrhea. J. R. Debray.—p. 700.
*Symptomatology of Meningitis. V. Vujic.—p. 702.
Dead Tubercle Bacilli and Cutaneous Allergy to Tuberculin. A. C. Maclouf.—p. 702.

Penicillin Therapy of Gonorrhea in Women.—Debray observed 19 failures in the course of penicillin therapy of 250 women with gonorrhea. The injections had been without accidents, but 3 women had developed severe metrorrhagia lasting two or three days. Observations on the 19 patients who had failed to respond to penicillin therapy revealed as local causes of the failure persistent urethritis, skenitis, cervicitis and bartholinitis and such general causes as extreme severity of the process, primary or secondary syphilis and obesity. Other possible causes of failure may have been old adnexitis, old metritis and abortions. The author concludes that failures are much more frequent in the penicillin therapy of gonorrhea in women than is the case in men.

Symptomatology of Meningitis.—Vujic directs attention to two new meningeal symptoms: tonic reflex movements provoked by sufficient and sudden bending of the head of the recumbent patient. The first is adductosupination of the feet with inside rotation of the legs (reflex of rotation). The second consists in pronation of the upper extremities (meningeal sign of pronation). The described reflexes appear in meningeal states before the neck sign of Brudzinski.

Dermatologica, Basel

93:113-188 (No. 3) 1946

Aspects of Generalized Exfoliating Erythrodermias, with Especial Consideration of Chromic Idiopathic Form. Anna Lutz.—p. 113.
Epidermolysis Bullosa Dystrophica with Dominant Heredity and with Great Differences in Manitestations. K. Hensler.—p. 155.
*Sensitivity of Skin to Soap in Eczema. C. H. Beek.—p. 167.
Prickly Heat. R. D. G. P. Simons.—p. 172.
Form Changes in the Gonococcus Caused by Penicillin. G. Simkovics. —p. 183.

Sensitivity to Soap in Eczema.—Beek and his associates tested skin sensitivity to soap of patients with eczema and of normal controls. Significant differences could not be established between the two groups. There was likewise no difference in the irritating effects of various pure soaps, but commercial soaps occasionally caused irritation, probably because perfumes had been added.

Prensa Médica Argentina, Buenos Aires

33:2199-2244 (Nov. 1) 1946. **Partial Index**

Surgical Treatment of Angina Pectoris. J. Estella.—p. 2199.
*Bronchial Adenoma: Study of 12 Cases Treated by Pulmonary Resection. F. E. P. Tricerri, L. Langer and E. Naclerio.—p. 2207.
Symptomatology and Treatment of Paroxysmal Tachycardia. J. Pombo. —p. 2217.
Coexistence of Disease of Biliary Bladder and Duodenal Ulcer. Teresa Malamud, N. Moguilner and A. Lisman.—p. 2224.
Poliomyelitis: Second Contribution to Study of Epidemic Prevailing in Argentina in the Years 1942 to 1943. D. Vivoli and N. S. Loizaga. —p. 2227.

Pulmonary Resection of Bronchial Adenoma.—Tricerri and his associates report 12 cases of bronchial adenoma which were cured by pulmonary resection, 8 of them by pneumectomy and 4 by lobectomy. They stress that bronchial adenoma is a surgical problem, owing to its extrabronchial extension, its potential malignancy and the irreparable damage it may produce by obstructing the distal portion. The extent of the pulmonary resection must be decided in each individual case in the course of the operation in accordance with the anatomic conditions in the extrabronchial part and the presence of metastases in the lymph nodes of the pulmonary hilus. Bronchoscopy is of great importance in the diagnosis.

Nordisk Medicin, Gothenburg

31:2187-2238 (Sept. 27) 1946. **Partial Index**

*Cardiac Disorders in Polyarthritis. A. Appelgren.—p. 2187.

Hospitalstidende

Intended and Undesired Effect in 191 Cases of Tapeworm Treated with Extractum Filicis in Doses of Up to 15 Gm. T. Espersen.—p. 2191.
*Congenital Familial Anhidrosis and Neurolabyrinthitis. H. F. Helweg-Larsen and K. Ludvigsen.—p. 2198.

Duodecim

Effective and Ineffective Pneumothorax Treatment. T. Laes.—p. 2203.
Quantitative Determination of Albumin Content in Cerebrospinal Fluid and Its Significance. O. H. Meurman.—p. 2210.

Hygiea

Regeneration of Striated Musculature: Method of Experimental Investigation. N. Grefberg.—p. 2213.
Effect of Carbohydrate and Protein Deficiency on Alkaptonuria and of Liver Injections and Vitamin B. C. Ekelund.—p. 2215.

Cardiac Disorders in Polyarthritis.—Appelgren studied cardiac complications in 205 cases of chronic and 106 cases of acute polyarthritis. Ages up to 60 are included, as the frequency of cardiac lesions in patients aged 50 and those aged 60 varies but slightly. Chronic polyarthritis, primary and secondary, dominate in the older age groups, acute polyarthritis in the younger age groups. Both acute and chronic forms are more frequent in women than in men, the proportion on the whole being 3:2. In acute polyarthritis cardiac complications occur about twice as often in women as in men, in the primary and secondary chronic forms about equally often in men and women. No definite relation was demonstrable between cardiac complication and the increased sedimentation reaction seen in about three fourths of all cases, acute and chronic. Cardiac disorders were established in 45.2 per cent of the primary chronic cases, 47.7 per cent of the secondary chronic cases and 40 per cent of the acute cases. The similarity of the results in the three different groups may indicate that the three types are to be regarded as different forms of the same disorder, depending on violence of infection, constitution and manner of reaction.

Congenital Familial Anhidrosis and Neurolabyrinthitis.—Helweg-Larsen and Ludvigsen say that in 14 of the members of the family described with congenital familial anhidrosis the deficiency depends on a greatly reduced number of sweat glands, the existing glands being hypertrophic. Neurolabyrinthitis appears at the age of from 35 to 45. There are no dental anomalies, defective growth of hair, ozena or cranial deformities. The symptom complex thus has few features in common with that in anhidrosis hypotrichotica. Salt deposits are characteristic, in the milder cases as grains or rings of salt crystals, in some instances as an extensive salt crust. The defect is transmitted by simple dominant inheritance and is assumed to represent a distinct hereditary symptom complex.

Book Notices

The National Formulary. National Formulary VIII. N. F. VIII. Prepared by the Committee on National Formulary under the supervision of the Council, by Authority of the American Pharmaceutical Association. Official from April 1, 1947. Eighth edition. Fabrikoid. Price, $7.50. Pp. 850, with illustrations. [Distributed by Mack Printing Co., 20th and Northampton Sts., Easton, Pa.] American Pharmaceutical Association, 2215 Constitution Ave., Washington 7, D. C., 1946.

The eighth edition of the National Formulary was made available the latter part of 1946. It supplants the seventh edition, published in 1942, and will succeed to official status April 1, 1947. The National Formulary is one of the "official" publications that provide legal standards for drugs and medicinal preparations marketed in this country The new formulary is of special interest because of its abandonment of many useless articles described in former editions. This trend reflects some of the basic changes in drug therapy that have come about during recent years. Mainly this is manifest by replacement of outmoded crude botanicals and biologic products with highly purified extracts and synthetic compounds. Some irrational combinations of drugs have been supplanted by more simplified formulas, though some, not above criticism in this respect, have been retained to provide standards for legal control of preparations of this type that remain on the market. The new formulary contains eighty-two articles not previously included, some of which represent transfers from U. S. P. XII. Other improvements of the eighth edition are to be found in the preference given for English titles and alphabetical arrangement and in greater emphasis on the metric system by parenthesis of the approximate apothecaries' equivalents of dosage. It also includes a table of approximate dose equivalents with an explanatory statement that has been adopted jointly by the Council on Pharmacy and Chemistry and the respective committees of the U. S. Pharmacopeia and the National Formulary. This cooperative step is in keeping with the prior adoption of the metric system for New and Nonofficial Remedies by the Council on Pharmacy and Chemistry. The new formulary, more than ever, will be entrenched as a recognized source of information on therapeutic agents. It is hoped that further deletions of outmoded articles may be effected in the next edition.

Stimulyatsiya zazhivleniya ran i yazvennykh protsessov: Itogi chetyrekh let raboty no teorii i praktike stimulyatsii zazhivleniya ran i yazvennykh protsessov. Sbornik 2. Pod redaktsiey i s predisloviem Prof. D. I. Goldberga. [Stimulation of Healing of Wounds and Ulcer Processes: A Summary of Four Years' Work on Problems of the Stimulation of Healing Wounds and Ulcer Processes with Ointments Containing Embryonic Emulsions. A Symposium Edited and Supplied with a Foreword and Summary. Article by Prof. D. I. Goldberg.] Paper. Price, 30 rubles. Pp. 266, with 38 illustrations. Tomsk: Izdanie Tomskogo Meditsinskogo Instituta, 1946.

The volume represents a symposium by the research workers and clinicians of the Tomsk Medical Institute on the effect of therapy with embryonal tissues on the healing of wounds. Embryos were obtained in the process of slaughter of cattle, swine and horses and were prepared under strict aseptic precautions. To 200 cc. of chopped up embryonal tissue was added 100 cc. of a vegetable oil or cod liver oil, 5 to 10 cc. of xeroform, and petrolatum or oil to make 1,000 cc. The investigators emphasize a rapid improvement in the appearance of the wounds so treated, a more rapid epithelization and healing. They speculate that the stimulating effect of the embryonal emulsion is probably the result of raising the reactivity of the tissues in hypoergic and anergic types of wounds and to the desensitizing effect of the stimulating substances in hyperergic types of wounds. Treatment with embryonal emulsion was particularly successful in burns of the second and third degree and in chilblains. This therapy, however, is definitely contraindicated in acute inflammatory processes, in the presence in the wound of necrotic masses or of extensive suppuration, foreign bodies and bone fragments. The authors emphasize that treatment with embryonal emulsion is in no sense a substitute for correct surgical intervention. They consider the method only as an auxiliary method. It must follow active surgical treatment of the wound and be combined with general and local antibacterial therapy, administration of vitamins and proper nourishment.

Medical Social Service in Tuberculosis Control. Miscellaneous Publication 37, Federal Security Agency, United States Public Health Service. Paper. Price, 10 cents. Pp. 22. Supt. of Doc., Government Printing Office, Washington, D. C., 1946.

Many of the economic and social problems which loom so large for the victim of tuberculosis may be dealt with by the properly trained medical social worker. As a liaison between the physician, the public health nurse, the community as a whole, the patient's family and the patient himself she can perform a valuable service. This booklet, published by the Tuberculosis Control Division of the Public Health Service, outlines the significant phases of the tuberculosis problem and sets forth the standards which should be met by the medical social worker in her job of assisting the tuberculous patient to adjust his life to the changes necessarily wrought by his physical condition. Her role in case finding, medical care, isolation and after-care, consultations with the various organizations concerned with treatment of the tuberculous and rehabilitation of the patient is most significant. Here is an opportunity for real social service, and more qualified women are needed for the extensive medical social work training program. Such workers can do much to alleviate the economic, social and emotional problems which follow in the wake of tuberculosis.

Applications of Germicidal, Erythemal and Infrared Energy. By Matthew Luckiesh, D.Sc., D.E., Director, Lighting Research Laboratory, General Electric Company, Nela Park, Cleveland. Cloth. Price, $5.50. Pp. 463, with 161 illustrations. D. Van Nostrand Company, Inc., 250 Fourth Ave., New York 3, 1946.

This is a compilation of knowledge and information gleaned through research and studies of the author and his colleagues in the field of ultraviolet, visible and infrared radiation. The subject matter is expertly assembled and the book is very readable. The physiologist, general practitioner and physiatrist will be more interested in the biologic effects of radiant energy than in the nonmedical applications. One chapter deals with erythema and tan, another with artificial sunlight, and a third with units and terminology. These chapters contain an abundance of selected and specialized information on the biologic effects of ultraviolet and infrared radiation. The data are in the form of tables, charts and graphs which are useful for reference. Various sources of radiation are described, including lamps which were used many years ago. The modern fluorescent lamps and newer sources of ultraviolet and infrared radiation are also explained. Their electrical and radiation characteristics are given.

One application of ultraviolet radiation advocated is the disinfection of air. The idea provokes one's imagination and any one who thinks about it hopes that a method can be developed which will prevent cross infection of disease in places where people congregate. The author devotes at least 200 pages to this subject. Another organization, the Council on Physical Medicine of the American Medical Association, has made a study of this problem too and its opinions are expressed in an article "Acceptance of Ultraviolet Lamps for Disinfecting Purposes" which appeared in THE JOURNAL in June 1943. The opinions of the Council differ from the ideas expressed by the author of this book. Committees of the National Research Council and of the American Public Health Association feel that the use of ultraviolet radiation for reducing certain infectious diseases is still purely in the experimental stage.

When reading the volume one cannot help but be impressed by the author's enthusiasm for promoting new uses for products manufactured by the company of which he is the director, the Lighting Research Laboratory. Psychiatrists will find this book a valuable addition to their libraries as a reference on the subject of radiation.

Suggestions for Courses in General Chemistry. By L. Jean Bogert, Ph.D. A Teachers' Guide Prepared for Use with the Sixth Edition of Bogert's Fundamentals of Chemistry and the Fifth Edition of Bogert's Laboratory Manual of Chemistry. Paper. Pp. 14. W. B. Saunders Company, W. Washington Sq., Philadelphia 5; 7 Grape St., Shaftesbury Ave., London, W. C. 2, 1946.

The suggestions presented in this pamphlet, which contains outlines for various courses in general chemistry, might better be left to the judgment of the instructor.

Symposia on Present Day Social and Economic Aspects of National Health and the United Nations Educational, Scientific and Cultural Organization, and American Participation in Its Activities: Papers Read Before the American Philosophical Society Annual General Meeting April 18, 19, 1946. Proceedings of the American Philosophical Society held at Philadelphia for Promoting Useful Knowledge, Volume 90, Number 4. Paper. Price, $1. Pp. 251-317. American Philosophical Society, Independence Square, Philadelphia 6, 1946.

This collection of papers read before the American Philosophical Society in April 1946 contains a considerable amount of worthwhile observation and thinking on the general subject of our national health. The introductory paper, "The Health of the American People," by Richard Harrison Shryock, is a historical survey of the developments in medical practice from Colonial days. He notes the progress which has been made but also presents the problems which are yet to be met. "The price of medical progress," he observes, "like that of liberty, is eternal vigilance."

"Mental Hygiene," by Dr. Winfred Overholser, presents a picture of what is held to be the largest and most pressing problem in the entire field of public health—mental health. Dr. Overholser speaks of the importance of psychosomatic medicine, of progress being made in group therapy, of narcosynthesis, of shock therapy, of child guidance and of industrial psychiatry. He stresses the need for recognition of psychiatry as an essential part of general medicine and urges that research in this field be more vigorously pressed.

I. S. Falk's paper, on "The Role of Government Agencies in a National Health Program," cites the lack of coordination of public health functions at the local, state and federal levels and approaches the issue of government medical care from the administrative point of view. He prescribes general methods of administration for federal compulsory health insurance, stating that medical care would function on a consumer basis at the local level. He presupposes the adoption of sickness and disability programs, recommending that state governments be used as agencies of the national government in the administration of a medical care insurance system. His proposals are broad and general, and they require much elaboration before they acquire feasibility.

Dr. Howard A. Rusk presents a timely report on "Convalescence and Rehabilitation" in which he urges large scale adoption of the Veterans Administration programs in civilian hospitals, so that greater progress can be made in the rehabilitation of the large numbers of crippled and otherwise physically handicapped citizens in addition to our war veterans. The injured industrial worker as well as the wounded veteran needs the help of a well developed rehabilitation program if he is to be conditioned for normal function and adjustment in his community.

In "The Place of the Physician in Modern Society" Henry E. Sigerist writes that it is the role of the physician to perform four major tasks. These are the promotion of health, the prevention of disease, the restoration of a patient's health and rehabilitation of the patient. The physician, says Professor Sigerist, is scientist, educator, social worker, friend and leader in the progress of our civilization.

W. A. Milliman, in his paper "The Relationships Between Governmental and Private Responsibilities for National Health," presents the problems which have been left virtually untouched and unsolved by the erstwhile proponents of national compulsory health insurance. The problem of controls and certain abuses of such a system, the lack of candor on the part of those who would have the government step into the practice of medicine, the effect of a national health insurance system on the quality and supply of medical service, and the position of the medical profession are dealt with objectively and critically. His observations are refreshing and worthy of consideration by those who would shy away from the practical problems of national health insurance. He discusses too the temporary cash disability benefits and presents a sound argument for the employer rather than the state or federal government as the ideal person for the responsibility of paying claims. All who are interested in the question of medical care insurance would do well to read this paper.

A dramatic climax to the symposium is the paper by Major Gen. Warren F. Draper of the U. S. Public Health Service, entitled "Public Health Experiences in the European Theatre of Operations." In addition to describing the work done by the G-5 Civil Affairs Division in dealing with the problems of civil governments and civilians in the devastated war areas, Major General Draper gives a harrowing account of what he saw in the German concentration camp at Buchenwald. This "extermination factory" was only one of many, and the horrors which he describes are something we cannot afford to ignore or forget.

Blodets askorbinsyre hos sunde og syke. Av Johannes Hagtvet. [Ascorbic Acid Content of Blood in Health and Disease.] Skrifter utgitt av Det norske Videnskaps-Akademi i Oslo, I. Mat.-Naturr. Klasse, 1945, No. 2. Paper. Price 9 kroner. Pp. 121, with 45 illustrations. I Kommisjon hos Jacob Dybwad, Torvet 2, Oslo, 1945.

This monograph deals with the methods, scope and results of a study of the ascorbic acid content of the blood in health and in disease. The work has been awarded the Skjelderup gold medal by the medical faculty of Oslo university. In 722 healthy subjects the yearly curve of the ascorbic acid in the blood reached its maximum in August and September, just like the ascorbic acid in the potato, which suggests that the potato is a main source of vitamin C nutrition of the Norwegian urban population. Extensive determinations are reported of ascorbic acid concentration in the blood in various diseases, and a chapter is devoted to clinicotherapeutic considerations. An English summary gives the main results.

Outline of the Spinal Nerves. By John Favill, A.B., M.D., F.A.C.P., Clinical Professor of Neurology (Rush), University of Illinois College of Medicine, Chicago. Cloth. Price, $3.75. Pp. 191, with illustrations. Charles C Thomas, 301-327 E. Lawrence Ave., Springfield, Illinois, 1946.

This is a unique reference book which attempts to supply full information on motor functions. It consists of lists of roots, nerves and muscles and of movements arranged in such a manner that one can start at any point and trace the nerve pathways. Supplementary data and drawings add to the ease of reference. In his preface Dr. Favill expressed the view that errors would be inevitable and that information on them would be appreciated. It is unfortunate that he died suddenly just about the time of the appearance of this volume, and it is to be hoped that some one else will continue his work and incorporate in future editions any corrections or improvements which are discovered by those who use the book.

The Royal Cancer Hospital Mechanically Sorted Punched Card Index System. Compiled by D. W. Smithers, M.D., M.R.C.P., D.M.R., K. M. H. Branson, M.B., F.R.C.S., and H. O. Hartley, Ph.D. Paper. Pp. 102. Royal Cancer Hospital, London, S. W. 3, 1945.

The system of recording information about cancer patients so that it may be sorted mechanically by means of punched cards is on preliminary trial in the Royal Cancer Hospital and the hospitals which cooperate with it in cancer work, preliminary to adoption on a more permanent basis. The book describes in detail the filling in of special cards and the coding for mechanical sorting. The book should be studied by all concerned with the keeping of adequate records of the observations on cancer patients and the results of treatment. The workings of the Royal Cancer Hospital system will be followed with special interest because it covers many hospitals. The advantages of uniformity of records in cancer clinics appear so obvious as to merit careful consideration, especially in large cancer centers.

Fundamentals of Chemistry. By L. Jean Bogert, Ph.D. Sixth edition. Cloth. Price, $3. Pp. 371, with 155 illustrations. W. B. Saunders Company, W. Washington Sq., Philadelphia 5; 7 Grape St., Shaftesbury Ave., London, W. C. 2, 1946.

This book has undergone another edition, primarily designed for those concerned in medicine, nursing and public health; it also covers the related sciences. It has been brought up to date.

Laboratory Manual of Chemistry. By L. Jean Bogert, Ph.D. Fifth edition. Loose-leaf. Paper. Price, $1. Pp. 196, with 27 illustrations. W. B. Saunders Company, W. Washington Sq., Philadelphia 5; 7 Grape St., Shaftesbury Ave., London, W. C. 2, 1946.

This manual provides simple experiments for the author's textbook "Fundamentals of Chemistry," to which it forms a valuable adjunct.

Queries and Minor Notes

THE ANSWERS HERE PUBLISHED HAVE BEEN PREPARED BY COMPETENT AUTHORITIES. THEY DO NOT, HOWEVER, REPRESENT THE OPINIONS OF ANY OFFICIAL BODIES UNLESS SPECIFICALLY STATED IN THE REPLY. ANONYMOUS COMMUNICATIONS AND QUERIES ON POSTAL CARDS WILL NOT BE NOTICED. EVERY LETTER MUST CONTAIN THE WRITER'S NAME AND ADDRESS, BUT THESE WILL BE OMITTED ON REQUEST.

GROWTH PROMOTING AGENTS

To the Editor:—I should like information on the probable effects of oral testosterone in aiding the growth of an 11 year old boy who is 52½ inches (132 cm.) in height and has no evidence of obesity or hypogenitalism or other endocrine disturbance, with normal epiphysial development. Would this cause early epiphysial closure with further stunting of growth?

Emil Rothstein, M.D., Wood, Wis.

ANSWER.—According to tables given in "Holt's Diseases of Infancy and Childhood" the range of normal height for boys 11 years of age is from 53 3/10 to 57 1/10 inches (135 to 145 cm.), while the patient mentioned is 52½ inches tall, only slightly shorter than the smallest of "normal individuals."

A few of the many causes of dwarfism are cretinism, chondrodystrophy, hypopituitarism, chronic malnutrition (including diabetic dwarfism) and renal insufficiency. Dwarfism caused by ovarian insufficiency has been described by Varney, Kenyon and Koch. It is not known definitely that a corresponding hypogonadal dwarfism occurs in the male. In fact, when hypogonadism in males occurs before puberty they are usually of normal or greater than normal height. In addition to the definite entities mentioned, there is a condition in which a so-called normal or pituitary dwarf seems to be normal in all respects save size. Such a normal dwarf will probably have an epiphysial age which corresponds closely with his chronologic age. It should be possible to demonstrate by roentgenologic examination of the average boy 11 years of age the external condyle of the humerus and the tubercle of the tibia (tables are given in Holt).

Difficulties arise in the evaluation of growth promoting agents because of the large number of unpredictable variations in the rate of growth that occur normally during childhood and adolescence and because of the poor correlation between height during the period of growth and height ultimately attained. Furthermore, it is difficult, if not impossible, to decide before a boy has reached the age of 15 whether hypogonadism is present or whether development is merely somewhat slower than is normal. This uncertainty has led to much confusion in the interpretation of the effects of various endocrine preparations on prepuberal children.

Agents which have been used in an attempt to stimulate growth include thyroid, pituitary growth hormone, chorionic gonadotropin and testosterone. Reports have been made of the effectiveness of a combination of thyroid and growth hormones. In such cases one cannot be certain which agent was responsible; and unless hypothyroidism is present it is doubtful whether thyroid is of value (Shelton). Cretinism, of course, responds dramatically to treatment with thyroid. A pituitary growth hormone has yet to be prepared which is of value in the treatment of patients. Chorionic gonadotropin from whatever source seems to exert its effects on growth by stimulation of the testes to form testosterone. A number of studies of the effects of testosterone on the growth of boys have been made; but because of the relatively small number of subjects and the inherent difficulty of obtaining adequate controls, final conclusions should not be drawn. Clinical studies suggest, however, that testosterone usually will cause acceleration of growth both of quantity of muscle and of length of some bones. Evidence also suggests that epiphysial closure may be hastened by testosterone, and cases of dwarfism apparently secondary to the formation of male hormone by tumors in childhood have been reported. It is impossible to predict which of these two effects of testosterone will predominate in any given case; it is impossible to say whether the increased rate of growth of bones or the earlier closure of epiphyses will have the greater effect. Therefore it may be questioned whether administration of testosterone will have any effect whatever on the ultimate height attained at maturity.

Well controlled studies of rats and mice indicate that the effect of testosterone on the growth of bone is minimal. Therefore it is suggested that administration of testosterone in a case such as the one about which inquiry was made be regarded as experimental and that the study be controlled as well as possible.

PITRESSIN FOR HYPERTENSION

To the Editor:—An article appeared in a lay magazine quoting Dr. J. Q. Griffith Jr. of the University of Pennsylvania on the use of pitressin in hypertension. Please discuss the rationale of this therapy.

G. E. Bowdoin, M.D., Elkhart, Ind.

ANSWER.—The rationale of the use of pitressin in hypertensive disease is based on the observation that the serums of hypertensive patients contain a substance capable of suppressing water diuresis in rats and the suspicion that the posterior lobe of the pituitary produces this antidiuretic hormone. Repeated injections of aqueous pitressin, given daily, increase the antidiuretic titer of the urine for a few days, but subsequently the urine attains diuretic properties. It was suggested that this effect is due to the appearance of an antihormone. Injections of small doses of pitressin tannate in oil weekly for three weeks and then monthly for three months are reported to have resulted in considerable benefit in patients selected because (1) bioassay for antidiuretic hormone is positive, (2) bioassay for gonadotropic substance in serum is negative at the level of 330 mouse units per hundred cubic centimeters and (3) renal function is normal (Griffith, J. Q., Jr.; Padis, N., and Anthony, E.: Selection of Patients with Arterial Hypertension for Treatment by Repeated Injections of Pitressin, Am. J. M. Sc. **212**:31 [July] 1946). The results parallel those obtained with pituitary irradiation. Therapy with pitressin is applicable to only a few cases of hypertensive disease in which pituitary involvement is clearly demonstrated. It will probably not solve the major problem of most hypertension, for there are many and various etiologic patterns.

CRETINISM AND MARRIAGE

To the Editor:—A woman aged 20 was diagnosed as a cretin shortly after birth. She has been given controlled doses of thyroid all her life and at present is using 1 grain (65 mg.) per day. She has some speech difficulties and wears an upper plate because of malocclusion. She has difficulty with fine motions of the hands but is able to write and to play the piano. Her weight is about normal for her height, and the skin and hair are only slightly suggestive of hypothyroidism. Her intelligence is apparently close to normal. She has done clerical work in her own home and has carried on correspondence as a member of a "letter club." She has finished the equivalent of a high school education under the tutelage of her mother, who is a trained educator and teaches underdeveloped children. The menarche occurred at 13 years of age; the menstrual periods are normal. The basal metabolic rate is within normal limits on the above thyroid dosage. The patient is contemplating marriage and has asked the following questions: 1. Is she likely to become pregnant? 2. In the event of pregnancy will the offspring be normal? 3. If the offspring are apt to be abnormal is a sterilization justified? What is the legal status of sterilization in a woman whose offspring are apt to be abnormal?

Sidney W. Raymond, M.D., Chicago.

ANSWER.—1. Since the patient is menstruating at regular intervals and would appear from the description given in the inquiry to be normally developed sexually, it is probable that she is fertile and can bear children. There is, of course, no way of being absolutely certain that any woman is capable of becoming pregnant until actual trial is made.

2. In the event of pregnancy the chances are that the offspring will be normal. The risk of the patient's giving birth to a cretinoid child is slightly greater than it would be if her thyroid gland was normal but the risk is small, so that it may be disregarded.

3. Since it is unlikely that the patient's offspring, if any, will be abnormal, sterilization is not justified. There would be no legal justification for such sterilization regardless of what the outcome of pregnancy might be.

CORONARY DISEASE AND FLYING

To the Editor:—A man aged 53 had a coronary occlusion two and one half years ago and recovered entirely from this attack except that he now has anginal pain on walking. Being a busy executive, he would like to fly long distances. Is there any danger when the plane attains a high altitude or when a sudden landing or an air pocket causes considerable loss of altitude? Are pressurized cabins or oxygen masks reasonable insurance against these risks?

M.D., Pennsylvania.

ANSWER.—The degree of coronary heart disease is most important. If angina pectoris is produced only by a considerable amount of effort, there would be no particular hazard in flying even at fairly high altitudes; but, if the coronary heart disease is severe and angina pectoris occurs at rest or on very slight exertion, there is a hazard not only from flying but from any other strain, great or small. Pressurized cabins and oxygen masks may reasonably be expected to reduce the risk of trouble in serious heart disease on flying at high altitudes, but not enough experience has been collected to warrant detailed statements of such preventive measures.

COSMETIC DERMATITIS

To the Editor:—A woman aged 36 has been a beauty parlor operator for several years. In August 1946 she developed a dermatitis on the fingers of the right hand. This gradually became worse and appeared on the fingers of the left hand. The lesions were accompanied with severe itching. She tried wearing rubber gloves but she could not work satisfactorily with them. However, when gloves were worn part of the time the lesions began to subside. When first examined three weeks after the onset, the patient presented patchy areas of dermatitis on the sides of the fingers and on the dorsum near the base of the nails. The lesions were dry and scaling and were thought to be subsiding. General physical examination was essentially negative. There were no other areas of dermatitis on the face, body or feet. Though the patient has been a beauty operator for several years, she has never had any cutaneous lesions before. New cosmetic items have not been used. A diagnosis of dermatitis venenata due to a cosmetic irritant was made. The patient was advised to stop working and not to use cosmetics. She was given mild tar ointment to apply twice daily. In the next five days the lesions disappeared almost completely and the itching subsided. On the fifth day she gave two finger waves without rubber gloves, using Hair Vita Finger Waving Lotion. In the next twelve hours she developed intense itching of both hands, including the palms. Many small papular lesions appeared on the lateral and volar surfaces of the fingers and palms, with a generalized redness of the skin of the hands. What substances in cosmetics are the common cause of contact dermatitis? What are the ingredients of Hair Vita Finger Waving Lotion? What other cosmetic preparations contain the same ingredients? Is skin testing and desensitization for these substances possible and successful? Of what value are the so called protective lotions which are rubbed on the skin previous to contact?

Lawrence O. Goodman, M.D., Marshalltown, Iowa.

ANSWER.—Cosmetic dermatitis usually appears abruptly and clears up in a reasonable time after contact with the sensitizer or the irritant has been discontinued. The eruption usually consists of erythema, edema, papules, vesicles, exudation, crusts and exfoliation. It tends to form patches with indefinite borders and is usually accompanied with pruritus. In chronic cases the skin becomes thickened, pigmented, infiltrated and fissured.

Dermatitis venenata produced by cosmetics is mostly due to an allergy on the part of the patient. The user was or has become sensitized to the cosmetic. However, there are chemicals which in certain concentrations will cause dermatitis of any one exposed to their action for a sufficient length of time. These are called primary irritants. Most of the chemicals used in cosmetics today are innocuous to most people.

It is impossible in so short a space to list all the primary irritants and sensitizers in common use in the various cosmetics. There are many excellent textbooks on the subject. Schwartz and Peck in their book on Cosmetics and Dermatitis, published by Paul B. Hoeber, Inc., in 1946, have a complete survey of modern cosmetics and their effects on the skin.

The exact constituents of Hair Vita Finger Waving Lotion have not been obtained. However, finger wave lotions have not materially changed in formulation for quite a few years. Hair Vita Finger Waving Lotion is apparently a cold wave lotion. Cold waving consists in applying solutions of chemicals to reduce and soften the hair so that it loses its elasticity and can take a curl. Then oxidizing solutions are applied to set the curl. In addition to this, usually 1 to 5 per cent solution of various gums or resins are applied to hold the curl. They also contain a small amount of alcohol for drying and perfume. The reducing agents are usually inorganic sulfides or thioglycolates. The oxidizing agents are usually iodides or "per" salts. The gums or resins commonly used are karaya, acacu, tragacanth, quince seed, sodium alginate, soluble shellac, chondrus or casun.

From the information contained in the inquiry, the lotion may contain sodium thioglycolate as a reducing agent. In recent years many cases of dermatitis have been found to be attributable to this substance. However, it is possible that the patient was sensitive to some other product used prior to the finger wave. In the past few years many wetting agents or synthetic detergents have replaced soap shampoos.

Skin testing, particularly the patch test, has become quite helpful in the search for the causal allergens. But the proper application of the patch test and the correct interpretation of the results have given some difficulty. Positive reactions have been known to occur with substances that had nothing to do with the causation of the eruption and, conversely, clinically proved allergens may give negative results. The reaction must therefore always be carefully correlated with other available data. It is especially important to ascertain the clinical effects of the removal of the substance and the clinical effects of reexposure.

Specific desensitization cannot be accomplished with satisfactory regularity at present. Some people become desensitized, others not. The use of protective lotions or creams of the nongreasy type may offer some protection in occupational dermatitis, but soap and water remove them and as a result have little value for a beauty parlor operator.

RENAL GLYCOSURIA

To the Editor:—A woman has a normal blood sugar value which ranges from 60 to 90 mg. per hundred cubic centimeters, and a low kidney threshold. What medicine can be used to control this low kidney threshold and glycosuria?

Kenneth A. Ohme, M.D., Mitchell, Neb.

ANSWER.—A diagnosis of renal glycosuria can be made if glycosuria consistently accompanies normal values for blood sugar, if pentosuria, fructosuria, lactosuria and galactosuria are excluded by tests described in any standard textbook of laboratory procedure and if the result of the glucose tolerance test is normal. This condition frequently is familial and hereditary and tends to be lifelong. The metabolic error is a failure of the renal tubules to reabsorb entirely the glucose in the glomerular filtrate. Loss of glucose in the urine may lead to mild symptoms of hypoglycemia or some loss of weight, but ordinarily the patient considers himself in good health and is unaware of his condition. Renal glycosuria will not develop into diabetes mellitus.

There is no drug capable of restoring the ability of the tubular cells to reabsorb glucose, and treatment is not indicated other than subsistence on a diet generous enough to compensate for the loss of glucose in the urine. Insulin therapy will only exaggerate the tendency toward hypoglycemia and may be dangerous. The "renal threshold" may be raised somewhat by any measure that will diminish glomerular filtration, such as dehydration or shock, but such a measure is obviously unpractical and would lead to harm.

The glycosuria that follows the administration of phlorhizin also is caused by failure of tubular reabsorption. However, the rate of loss of glucose is so great in this condition that ketosis and acetonuria result unless an adequate supply of carbohydrate is administered.

More information can be obtained in the following references:

Blotner, Harry, and Hyde, R. W.: Renal Glycosuria in Selectees and Volunteers, THE JOURNAL, June 12, 1943, p. 432.

Smith, Florence H., and Smith, K. A.: Normoglycemic Glycosuria Differentiated from Other Benign Glycosurias and Diabetes Mellitus, *Arch. Int. Med.* **60**: 119 (July) 1937.

Mirsky, I. A., and Nelson, Norton: Significance of Glycosuria, *Arch. Int. Med.* **71**: 827 (June) 1943.

Wilder, R. M.: Clinical Diabetes Mellitus and Hyperinsulinism, Philadelphia, W. B. Saunders Company, 1940.

SIALORRHEA AND MORPHINE ADDICTION

To the Editors:—What can be done to correct extreme salivation in a woman aged 69 suffering from a coronary sclerotic heart disease who has become addicted to morphine with atropine? Her daily dosage is about 1 grain (65 mg.)

M.D., New York.

ANSWER.—A relationship between salivation and the use of moderate or large doses of an opiate is not known. When physical dependence to an opiate exists, sialorrhea may occur during withdrawal. This is a temporary phenomenon.

A common cause of long-continued and severe salivation is the parkinsonian syndrome, whatever the etiology. In this patient, even though a well defined parkinsonism is not present, the administration of an atropine-like preparation in as large doses as can be tolerated might be tried.

The use of the word "addicted" in this and similar situations must be challenged. To assume that addiction exists, something more than the habitual use of a substance or pursuit of a practice must be present. Three criteria must be met: (1) loss of control with reference to a substance or practice, (2) harm in some form to the patient, to his group or to both and (3) condemnation by society of the use of the substance or pursuit of the practice. It seems unlikely that any but the first criterion, if that, can be met here.

Persons suffering from heart disease who have been placed on an opiate routine sometimes develop a habitual use over and above the therapeutic needs and may be considered addicts. Such an addiction can be corrected rather easily if we can control the patient and the environment. Sometimes, however, if we try to establish total abstinence from opiates the patient may exhibit signs and symptoms, including those of decompensation, which the physician inexperienced in the treatment of the abstinence syndrome may confuse with this picture. If he persists in his withdrawal regimen, serious decompensation, even death, may result.

It is debatable whether the administration of opiates to cardiac patients to the point of physical dependence is justifiable. Prolonged administration of small amounts after dependence has been established is not justified.

TREATMENT OF FASCIOLOPSIS INFECTION

To the Editor:—A patient, who was in the Army, had abdominal cramps and occasional diarrhea while in the South Pacific. Physical examination at that time apparently gave normal results. Since then there has been considerable loss of weight and a slight anemia. A stool examination revealed ova of Fasciolopsis buski. This diagnosis was confirmed subsequently by several laboratories. Two courses of hexylresorcinol have brought only temporary relief. Ova can still be recovered from the stool after the second course of treatment. Please outline the treatment of this disease.

Richard D. Falkenstein, M.D., Pampa, Texas.

ANSWER.—Fasciolopsis buski is an oriental fluke found in man chiefly in the small intestine and especially in the duodenum. It may be found attached in the stomach and upper part of the colon. Its geographic distribution south of Borneo is poorly known, although one might expect it exceptionally in the south Pacific islands. In the case described in the query, it is important to be certain of the differential diagnosis, especially from Fasciola hepatica, Fasciola gigantica and Echinochasmus perfoliatus.

Treatment of choice is with (1) tetrachlorethylene, (2) carbon tetrachloride or (3) beta-napthol. Hexylresorcinol is much less efficient, a cure rate of only 54 per cent being reported by McCoy and Chu (*Chinese M. J.* **51**:937 [June] 1937).

1. Chemically pure tetrachlorethylene is given in an adult dosage of 3 cc. in a single dose. Epsom salt 15 Gm. (½ ounce) should be given in a glass of water the night before treatment. The patient fasts the following morning and takes 3 cc. of the drug in gelatin capsules. Two hours later the patient repeats the Epsom salt, 15 Gm. in a glass of water. Transient dizziness and headache disappear with the action of the second dose of Epsom salt.

2. Chemically pure carbon tetrachloride is given in a dose of 3 cc. in a little water or milk. On the preceding evening the patient has a light supper of toast and milk, followed by an enema. On the morning of treatment the patient fasts until after good purgation has occurred. Two hours after the carbon tetrachloride the patient is given 15 cc. of Epsom salt in a glass of water. This drug is toxic and the patient should receive full dosage of calcium lactate or gluconate orally for four days before treatment. Contraindications are fever, alcoholism, cirrhosis of the liver and diseases of the kidneys or respiratory tract.

3. Beta-napthol must not be used in pregnancy or malaria. It is given in two doses of 0.2 Gm. each in gelatin capsules.

Reference: Faust, E. C.: Human Helminthology, ed. 2, Philadelphia, Lea & Febiger, 1939 p. 178.

PRESERVATION OF SPERMATOZOA

To the Editor:—Please give formulas for the preservation of sperm cells in viable form. A solution is needed for a "sperm bank" for research work on lower animals.

M.D., New York.

To the Editor:—Is there a way to preserve spermatozoa for use in artificial insemination? Most reports suggest that the semen be obtained from the donor in the office and used within an hour or so. This is not always possible, especially in a small town. If the sperm cell can be preserved, for how long will it be usable?

M.D., Texas.

ANSWER.—Sperm cells of different mammals exhibit great variability in periods of viability after collection of semen. Most information comes from investigations on sperm from livestock. Viability—i. e. capacity to show movement on proper handling—persists longer than the capacity to fertilize the egg.

According to Green, Winters and Comstock (Bull. 336, University of Minnesota Agricultural Experiment Station) sheep sperm for artificial insemination are preserved longest when equal quantities of semen and dilutor are mixed (dilutor monosodium acid phosphate 1 part, water 12 parts, 15.4 Gm.; potassium dihydrogen phosphate 3.2 Gm.; sterile distilled water 1 liter, calcium sulfate saturate). The p_H should be 7.0.

An egg yolk dilutor has been used successfully for bull semen by Lardy and Phillips (*Am. Soc. Anim. Prod. Proc.* **32**:219, 1939), and the method has also been used for stallion, ram and boar semen. A dilutor is made of equal volumes of fresh egg yolk and a sterile buffer (potassium dihydrogen phosphate 0.2 Gm. and monosodium acid phosphate 1 part, water 12 parts, 2 Gm., in 100 cc. of sterile distilled water). The p_H of the mixture should be approximately 6.75. One part of semen may be added to 3 or 4 parts of the buffer solution. Calves and lambs have been born after insemination with such diluted semen for six to seven days, but in field practice storage longer than forty-eight hours is not recommended. Storage of semen in the dilutor should be kept at temperature of about 41 F.

Good methods of preserving human spermatozoa for delayed artificial insemination are unknown. The following general principles can be stated: Storage must be at low temperatures and cooling should be gradual (temperatures below 41 F. are always used for animal spermatozoa); air should be excluded, perhaps by covering undiluted semen in small tubes with liquid petrolatum; changes in temperature should be slow. Human sperm have been retained in motile condition for several days in egg yolk solutions as with farm animals, but fertility is probably limited to twenty-four to thirty-six hours storage.

FIBER GLASS CLOTHING

To the Editor:—A boy aged 3 years is unable to wear wool garments because of an allergic skin reaction. It will be difficult to obtain satisfactory snow suits for him in winter. Good quality snow suits are available which are constructed of Byrd cloth (cotton) exterior with a woven cotton lining and an interlining of spun glass instead of ordinary wool. The interlining does not come in direct contact with the wearer because it is encased between the Byrd cloth exterior and the woven cotton lining. Can skin irritation from spun glass or fiber glass occur under these circumstances? Is this type of clothing desirable and safe for a child with a sensitive skin?

M.D., Illinois.

ANSWER.—Dermatitis from spun glass fabrics is in a large majority of cases due to direct physical irritation of the skin by the sharp glass fibers. Only rarely does a case of allergic dermatitis occur from whatever resins are used in forming the fibers from the spun glass. If the glass interlining does not touch the skin, dermatitis cannot occur from the glass itself. Clothing worn under the snow suit would also prevent contact of the glass fabric with the skin.

If the child's sensitivity is only to wool and not to other substances, such a garment as you describe should not irritate the skin.

DIAGNOSIS OF BLEPHAROCONJUNCTIVITIS

To the Editor:—A woman aged 70 has had an itching of the eyelids involving the conjunctivas for several weeks. Commonly used preparations such as mild silver protein, butyn, 1 and 2 per cent yellow oxide of mercury, holocaine ointment and boric acid solution give only temporary relief. The patient has had similar attacks each summer for the past three or four years but the present attack is prolonged and resists the ordinary measures. There is no inflammation in any of these tissues—just an annoying itching, a sort of essential pruritus. Her general health is fair. Her eyes are properly refracted. The condition does not seem to be allergic. Kindly advise me of any treatment that might relieve the condition.

Joseph A. Robinson, M.D., Darlington, S. C.

ANSWER.—This must be either a case of neurodermatitis common in older women or an allergy.

The fact that it has recurred for three or four years points to an allergy which is seasonal. The fact that it persists beyond the summer does not rule this out. With an allergy one sees follicles of various sizes in the lid conjunctiva, velvety tarsal conjunctiva or minute cystic-like follicles on the upper tarsal border. There may or may not be a stringy secretion. Conjunctival scrapings often reveal eosinophils.

The neurodermatitis condition most often presents wrinkled, brownish lid skin, with silvery scales and no conjunctival involvement other than dilated conjunctival blood vessels. The same picture has been caused by local sensitivity to cosmetics, soap or perfume.

The treatment consists in small doses of phenobarbital, cold compresses and, if the itching is very severe and not alleviated by cold compresses, the use of an ointment containing 1 per cent salicylic acid.

CHOLESTEATOMA

To the Editor:—Is there any medication which, by instillation or irrigation of the middle ear, will dissolve cholesteatomatous masses so that they can be removed easily from the external ear canal?

M.D., California.

ANSWER.—The middle ear cavity, which is the usual site of cholesteatoma, may be irrigated with increasing strengths of alcohol solution, starting with about a 50 per cent solution. This irrigation must be carried out with a special cannula the curved tip of which is inserted through the perforation in the drum membrane, which leads to the attic, the situation of most cholesteatomas.

It is better to use stronger, rather than weaker, alcohol solutions, because a cholesteatoma will swell if water is used as the irrigating fluid. The use of water in the ear in the presence of cholesteatoma may lead to serious consequences, because the cholesteatomatous mass may swell and, by pressure, expose the dura and inner ear to infection.

Ether has been used by some as an irrigating solution, but more discomfort is caused by ether than by alcohol.